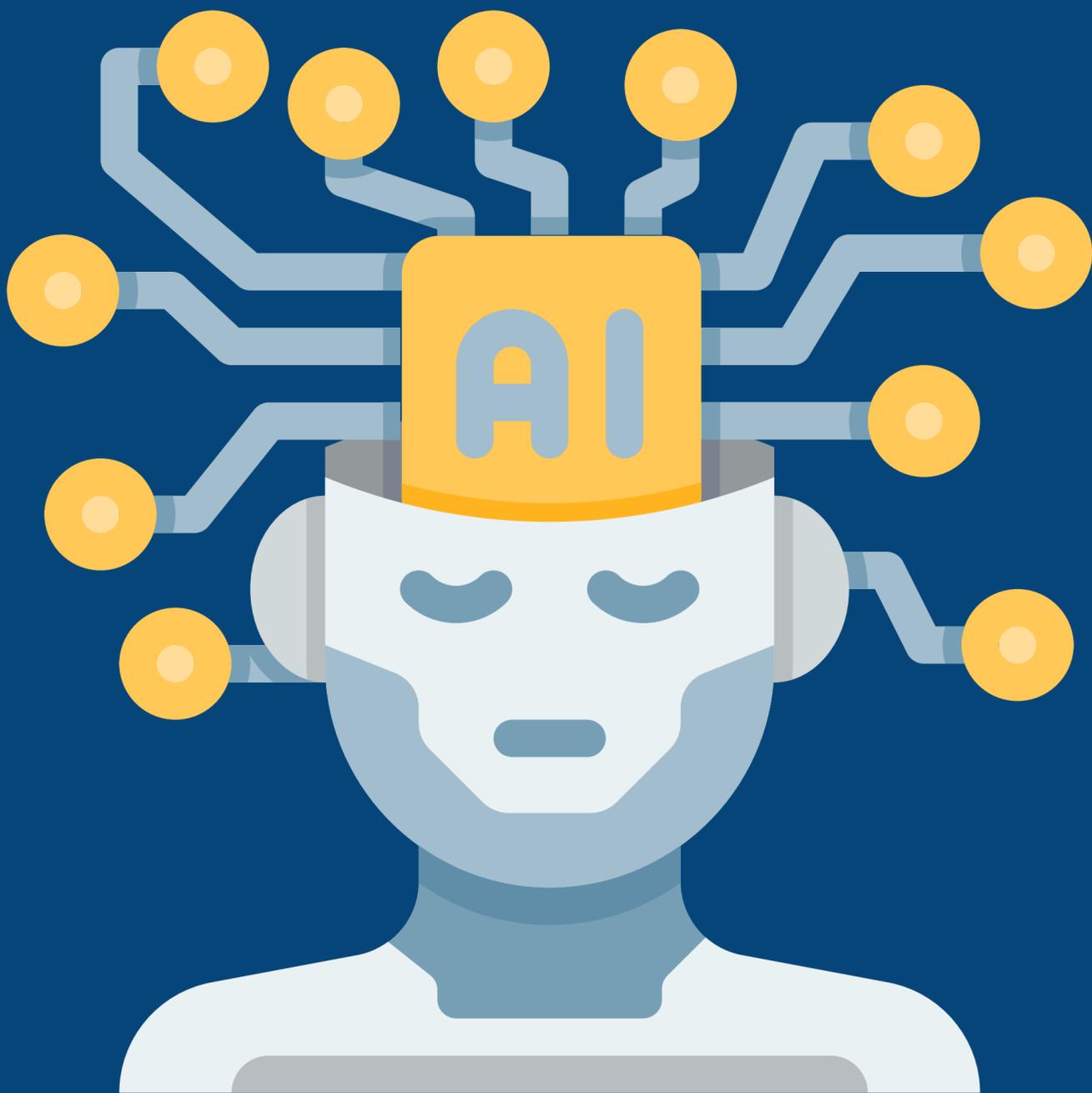




**6th**



**INTERNATIONAL SEMINAR ON  
INTELLIGENT LIBRARIES:  
HARNESSING AI DRIVEN FUTURE**



***Souvenir 2026***

**Organized By**  
*Universal Briefing*  
**In Collaboration With**  
*Muralidhar Girls' College*

**Two-Day International Seminar  
On  
Intelligent Libraries:  
Harnessing AI Driven Future**

**Date**

February 20-21, 2026

**Venue**

TEQIP Building Auditorium  
Jadavpur University, Kolkata-700032  
West Bengal India

**Organized By**

Universal Briefing  
Kolkata, West Bengal, India

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Muralidhar Girls' College  
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National Digital Library of India  
IIT Kharagpur, West Bengal

## **TWO-DAY INTERNATIONAL SEMINAR - 2026**

The souvenir of the Two-Day International Seminar on Intelligent Libraries: Harnessing AI Driven Future organized by Universal Briefing, Kolkata in collaboration with Muralidhar Girls' College, Kolkata on 20<sup>th</sup> and 21<sup>st</sup> February 2026 at TEQIP Building Auditorium, Jadavpur University, Kolkata, India.

### **EDITED BY**

Professor Udayan Bhattacharya  
Dr. Ranjan Samanta  
Dr. Swapan Khan  
Smt. Bangasree Dey

### **EDITORIAL ASSISTANCE TEAM**

Dr. Santashree Basu  
Debolina Biswas  
Rupali Rupasmita Pradhan

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# PRELUDE

## *International Seminar on* **Intelligent Libraries: Harnessing AI-Driven Future**

It gives me immense pleasure and a profound sense of pride to extend my warm greetings to all distinguished delegates, scholars, academicians, library professionals, researchers and students participating in this International Seminar on *Intelligent Libraries: Harnessing AI-Driven Future*. On behalf of the Seminar Organizing Committee and Universal Briefing, I welcome you to this significant academic congregation dedicated to exploring the transformative role of Artificial Intelligence in shaping the future of libraries.

Libraries have always been dynamic institutions-adapting, evolving and redefining their services in response to societal and technological changes. Today we stand at the threshold of a new era where Artificial Intelligence, machine learning, data analytics and automation are not merely tools but catalysts for innovation in knowledge organization, information retrieval, user engagement and decision-making processes. Intelligent libraries are no longer a futuristic concept. They are becoming a reality that enhances efficiency, personalization, accessibility and inclusivity in information services.

This seminar aims to provide a vibrant platform for intellectual exchange and critical discourse on emerging trends such as AI-driven cataloguing, smart discovery systems, predictive analytics for user services, chatbots in reference services, digital preservation technologies and ethical considerations in AI implementation. As information professionals, we must not only embrace technological advancements but also examine their implications for privacy, equity, professional roles and sustainable development.

The deliberations and research contributions presented in this seminar will undoubtedly stimulate thoughtful dialogue and collaborative exploration. I am confident that the scholarly papers, keynote addresses and interactive sessions will generate innovative ideas and practical strategies to harness AI responsibly and effectively within library ecosystems.

The publication of this Souvenir stands as a testament to the collective intellectual effort and academic commitment of all contributors. It reflects diverse perspectives and pioneering research that will serve as a valuable resource for professionals and researchers engaged in reimagining libraries for the digital age.

I extend my sincere appreciation to the advisory board, guests, organizing team, reviewers, speakers, contributors, sponsorship agencies, Muralidhar Girls' College Authority, Jadavpur University Authority, DLIS, JU and all stakeholders whose dedication and cooperation have made this seminar possible.

May this seminar inspire meaningful collaborations and chart a progressive roadmap toward intelligent, inclusive and future-ready libraries.

With best wishes for the grand success of the seminar.

**Dr. Ranjan Samanta**

Organizing Secretary, Seminar

General Secretary, Universal Briefing



# MESSAGES



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[universalbriefing@gmail.com](mailto:universalbriefing@gmail.com)



+91-9231433776 / 9433469618



+91-7044093057

### MESSAGE

“The only limit to our realization of tomorrow will be our doubts of today.” - Franklin D. Roosevelt



As technology changes the world around us, the way we manage information is reaching a very important turning point. Today, libraries are not just places to store books; they are becoming smart centers that can understand and process data. It is with great pride that I welcome you to the 6th International Seminar hosted by Universal Briefing this time in joint collaboration with Muralidhar Girls College, Kolkata. This year, our theme is “Intelligent Libraries: Harnessing an AI Driven Future.” We have received a huge response from participants everywhere, showing that we all agree on one thing: Artificial Intelligence is no longer just an option, but a necessary tool to help our libraries grow and better serve the people. Our

goal is to use these new tools to make information more accessible while still respecting the hard work and rights of those who create it. We hope this seminar provides a platform where we can learn from one another and find practical ways to bring these advanced technologies into our daily work.

The efforts of this organization are not limited to a single day or a one time event that disappears once the program ends. We believe in continuous action and constant engagement through our various initiatives. Our monthly Newsletter is published during the first week of every month without fail to keep our community updated and connected. Along with this, we organize various small and big events all year round to ensure that the exchange of knowledge never stops. A true strength of Universal Briefing is its people. Every member of this organization works on a completely voluntary basis. No one is paid for their services, yet they dedicate their time and energy purely out of love for this organization and a sincere desire for the betterment of our subject. This selfless commitment is what allows us to grow and remain a vibrant platform for information professionals.

While we look forward to a high tech future, we are also celebrating a historic milestone for our community. On the days of this seminar, our Study Circle will be completing its 50th session since its inception. To celebrate this Golden Jubilee, we are breaking from our usual routine to make this a truly memorable occasion. While the previous 49 study circles were conducted virtually, this landmark 50th session will be held in a physical mode for the very first time. Our guest speaker will be present with us in person to share his expertise, allowing for the kind of face to face interaction and deep brainstorming that only a physical gathering can provide. I am sure that these two days, 20th and 21st February 2026, will be full of productive discussions and happy reunions. I want to thank every speaker, participant, and volunteer who has contributed to making this event a grand success.

With Regards,

Dr. Udayan Bhattacharya  
President, Universal Briefing

Purkayasthpara, Ramchandrapur North, Narendrapur, Kolkata – 700103, West Bengal, India



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Ph.Office: 2464-1312  
Principal: 2464-4371

Ref.No.....

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### MESSAGE

It gives me immense pleasure to extend my warm greetings to all delegates, scholars, academicians, and professionals participating in the Two-Days International Seminar on "Intelligent Libraries: Harnessing AI Driven Future." This seminar, organized in collaboration with Universal Briefing, marks a significant academic initiative of both the organization toward exploring the transformative role of Artificial Intelligence in library and information services.

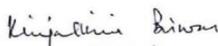
Libraries have always been the custodians of knowledge, evolving continuously from traditional repositories to dynamic digital knowledge hubs. In the present era, Artificial Intelligence is redefining how information is organized, accessed, and disseminated. This seminar provides a timely platform for intellectual exchange on innovative AI-driven practices, ethical dimensions, and sustainable technological integration in libraries and higher education.

I am confident that the deliberations, research presentations, and scholarly discussions will contribute significantly to the advancement of intelligent library systems and future-ready information services. Such academic gatherings not only enrich professional knowledge but also foster collaboration among researchers, librarians, and technology experts across institutions and nations.

I congratulate the organizing committee for their dedicated efforts in arranging this international seminar and extend my best wishes for its grand success. I also express my sincere appreciation to all contributors and participants whose involvement makes this academic endeavour meaningful.

May this seminar inspire new ideas, research directions, and innovations in the domain of AI and libraries.

With best wishes,

  
Principal  
Muralidhar Girls' College  
Kolkata - 700029

Principal  
Muralidhar Girls' College  
Kolkata



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## COMMITTEE DETAILS

### *Advisory Committee*

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Dr. Susmita Sarkar Basu, Librarian, Bankim Sardar College, Tangrakhali, South 24 Parganas  
Mr. Avijit Naskar, Librarian, Kendriya Vidyalaya, Bagafa  
Ms. Debolina Biswas, Research Scholar, Jadavpur University  
Ms. Rupali Rupasmita Pradhan, Research Scholar, Jadavpur University  
Mr. Subham Das, Research Scholar, Jadavpur University  
Mr. Niladri Majumdar, Research Scholar, Jadavpur University  
Mrs. Gargi Dhali, Librarian, Kendriya Vidyalaya, NFR New Jalpaiguri  
Mrs. Chandana Paul, Research Scholar, JU, West Bengal  
Mr. Pradipta Bandyopadhyay, Librarian, Future Hope School  
Ms. Shreya Thakur, Librarian, (Public Library), South 24 Parganas  
Ms. Supriti Das, Librarian, (Public Library), Hooghly  
Mr. Arindam Roy, Member, Universal Briefing, Kolkata, West Bengal

### **Rapporteurs:**

Dr. Suparna Naskar, Librarian, Siliguri College  
Dr. Siv Shakti Ghosh, Librarian, Surendranath College for Women  
Miss Sukriti Pal, Student (MLIS), DLIS, Jadavpur University  
Miss Prethika Acharjee, Student (MLIS), DLIS, Jadavpur University

## **Organizing Sub-Committee**

### **Reception & Accommodation:**

**Chairman:** *Dr. Madhusree Ghosh Upadhyay*

**Joint Conveners:** *Dr. Gayatri Pal, Smt. Bangasree Dey & Ms. Rupali Rupasmita Pradhan*

**Members:** *Pradipta Bandopadhyay, Supriti Das, Chaitali Ghosh, Dr. Susmita Sarkar Basu, Animesh Dutta.*

### **Publication:**

**Chairman:** *Dr. Ranjan Samanta*

**Joint Conveners:** *Dr. Sanat Bhattacharya, Dr. Santashree Basu & Mr. Subham Das*

**Members:** *Dr. Swapan Khan, Debolina Biswas, Rupali Rupasmita Pradhan, Jaya Sharma*

### **Food & Refreshment:**

**Chairman:** *Dr. Soumen Mondal*

**Joint Conveners:** *Dr. Asim Kumar Dutta & Mr. Bidyut Sardar*

**Members:** *Ananda Kumar Saha, Dipankar Roy, Dinesh Ghosh, Debasish Mukherjee*

### **Publicity:**

**Chairman:** *Dr. Avik Roy*

**Joint Conveners:** *Ms. Tanusree Rakshit & Mr. Niladri Majumdar*

**Members:** *Dr. Arijit Das, Dr. Arindam Sarkar, Dr. Suparna Naskar, Shreya Thakur, Animesh Dutta*

### **Finance:**

**Chairman:** *Dr. Atanu Das*

**Convener:** *Dr. Pronobi Porel*

**Members:** *Smt. Bangasree Dey, Dr. Gayatri Pal, Dr. Suparna Naskar*

### **Technical:**

**Chairman:** *Dr. Swapan Khan*

**Joint Conveners:** *Mr. Avijit Naskar & Ms. Jaya Sharma*

**Members:** *Subham Das, Niladri Majumdar*

### **Stage Management:**

**Chairman:** *Dr. Ranjan Samanta*

**Joint Conveners:** *Dr. Santashree Basu & Ms. Debolina Biswas*

**Members:** *Rupali Rupasmita Pradhan, Tanushree Rakshit, Chaitali Ghosh, Jaya Sharma, Ankira Sanyal, Supriti Das, Sreya Thakur.*

# **PROGRAM SCHEDULE**

## **INAUGURAL PROGRAMME**

**Date: 20<sup>th</sup> February 2026**

**Time: 10:30 A.M. – 01:00 P.M.**

**Venue: TEQIP Building, Jadavpur University**

### **Welcome Address**

**Dr. Ranjan Samanta**

General Secretary, Universal Briefing  
&  
Librarian, Naba Ballygunge Mahavidyalaya, Kolkata

### **Inaugurator**

**Prof. A.R.D. Prasad**

Former Professor & Head, DRTC-ISI, Bangalore

### **Chief Guest**

**Prof. Pijushkanti Panigrahi**

Professor, Department of Library and Information Science, University of Calcutta

### **Seminar Director**

**Prof. Udayan Bhattacharya**

President, Universal Briefing  
&  
Head, Department of Library and Information Science, Jadavpur University

### **Seminar President**

**Dr. Kinjalkini Biswas**

Principal, Muralidhar Girls' College, Kolkata

### **Vote of Thanks**

**Dr. Swapan Khan**

General Secretary, Universal Briefing  
&  
Librarian, Narasinha Dutt College, Howrah

### **Keynote Speaker**

**Prof. Parthasarathi Mukhopadhyay**

Head, Department of Library and Information Science,  
University of Kalyani

**Date: 20.02.2026**

**Technical Session – I**

**Time: 01:00 P.M. – 02:00 P.M.**

**Chairpersons**

**Dr. Durga Sankar Rath**

Professor

Department of Library and Information Science, Vidyasagar University  
&

**Dr. Ziaur Rahman**

Associate Professor

Department of Library and Information Science, Rabindra Bharati University

**Invited Speaker**

**Dr. Saptarshi Ghosh**

Professor and Head

Department of Library and Information Science, North Bengal University

<b>Title of the Paper</b>	<b>Name of Author(s) &amp; Affiliation(s)</b>
Measuring Interdisciplinarity of the Articles on “Application of AI on LIS” Using Diversity-Based Indicator	<b>Poulami Pal</b> Research Scholar, Department of Library & Information Science, University of Kalyani. <b>Prof. Sibsankar Jana</b> Professor, Department of Library & Information Science, University of Kalyani
From Information Literacy to AI Literacy: Reconfiguring User Competencies in Library-Mediated Knowledge Systems	<b>Dr. Sohini Sengupta</b> Librarian, Seth Anandram Jaipuria College, Kolkata
Building The Future Mind: Evolving Higher Education to Meet the Demands of The Ai Era	<b>Debkanta Halder</b> Researcher, Department of Library and Information Science, Jadavpur University
Faculty Preparedness and Institutional Challenges in AI Capacity Building	<b>Akash Hazra</b> MLISc Student, DLIS, Jadavpur University, Kolkata, India
Analyzing the publications on Model Context Protocol indexed on OpenAlex: An Application of Data Carpentry	<b>Tirtharaj Dasgupta</b> Junior Research Fellow, DLIS, University of Kalyani, Kalyani, Nadia

<p>Artificial Intelligence on Publication: Trends of Library Literature</p>	<p><b>Dr. Chaitali Ghosh</b> Librarian, School of Education Technology, Jadavpur University</p> <p><b>Ankita Sanyal</b> College Librarian, Sarojini Naidu College for Women, Kolkata</p>
<p>From Conventional to Intelligent Libraries: Skill Development Challenges for Librarians</p>	<p><b>Ditu Bhungia</b> Research Scholar, DLIS, Jadavpur University</p> <p><b>Sonali Dutta</b> Research Scholar, DLIS, Jadavpur University</p> <p><b>Prof. (Dr) Subarna Kumar Das</b> Professor, DLIS, Jadavpur University</p>
<p><b>Technical Session – I (Parallel)</b> <b>Time: 01:00 P.M. – 02:00 P.M.</b></p>	
<p><b>Chairpersons</b></p> <p><b>Dr. Sanat Bhattacharya</b> Assistant Librarian, In-charge Siksha Bhavana Library, Visva-Bharati</p> <p>&amp;</p> <p><b>Dr. Prabin Karkee</b> Assistant Professor Department of Library &amp; Information Science, University of Gour Banga</p>	
<p><b>Title of the Paper</b></p>	<p><b>Name of Author(s) &amp; Affiliation(s)</b></p>
<p>Evolution of AI-Enabled Library Operations Research: A Bibliometric Analysis of Growth, Collaboration, and Research Themes (2006-2025)</p>	<p><b>Kishore Dey</b> Librarian, Karunamoyee Library</p> <p><b>Dr. Suparna Naskar</b> Librarian, Siliguri College</p> <p><b>Dr. Tapan Barui</b> Assistant Professor, Department of Library and Information Science, University of North Bengal, West Bengal</p>
<p>Opinion of Young Generations about AI- Based ICT Applications in Higher Education: A Case Study in an Academic Library of an Institution</p>	<p><b>Rumpa Pal</b> Librarian, Vidyanagar College, South 24 Parganas, West Bengal</p>

Smart Libraries: Embracing an AI-Driven Future in Higher Education and Building AI Skills	<b>Nabonita Rakshit</b> Student, M.LIB.I.SC, Rabindra Bharati University
Influential Capital Expenditures on Academic Persuasion and Research Activities Affecting NIRF-Rank for the University of Calcutta	<b>Dr. Pubalika Bhattacharya Maitra</b> Assistant Professor, Dept.of Library and Information Science, University of Calcutta <b>Robama Mostafa</b> Research Fellow, Dept.of Library and Information Science, University of Calcutta
Application of AI In Digital Archives	<b>Dr. Mohitosh Das</b> Librarian, Serampore College, University of Calcutta
Artificial Intelligence in Scholarly Communication: Transformations, Opportunities, and Challenges	<b>Dr. Abhijit Chatterjee</b> Librarian, Seth Anandram Jaipuria College <b>Dr. Anwasha Chatterjee</b> Librarian, Purnidevi Chowdhury Girls' College
Evolving Competency Requirements for Library Professionals in the Age of Artificial Intelligence	<b>Nilanjana Mondal</b> SRF, DLIS, Jadavpur University <b>Dr. Subarna Kumar Das</b> Professor, DLIS, Jadavpur University
AI-Enabled Analysis of Semantic Overlap in Scholarly Communication Using Thematic and Similarity Analysis in Library and Information Science: A Conceptual Framework	<b>Riya Karmakar</b> Research Scholar, University of Kalyani <b>Prof. Sibsankar Jana</b> Professor, Department of Library & Information Science, University of Kalyani
AI-Enabled Smart Circulation and Inventory Management Systems in Academic Libraries	<b>Jayashree Patra</b> Librarian (Department of Science and Commerce), J. D. Birla Institute, Kolkata <b>Pritish Chandra Bal</b> Research Scholar, Department of Library and Information Science, Jadavpur University <b>Prof. (Dr.) Subarna Kumar Das</b> Department of Library and Information Science, Jadavpur University, Kolkata
<b>LUNCH: 02:00 P.M. - 03:00 P.M.</b>	

**Technical Session – II**  
**Time: 03:00 P.M. – 04:00 P.M.**

**Chairpersons**

**Dr. Subarna Kumar Das**

Professor

Department of Library and Information Science, Jadavpur University  
 &

**Dr. Rajesh Das**

Assistant Professor

Department of Library and Information Science, University of Burdwan

**Invited Speaker**

**Dr. Durga Sankar Rath**

Professor

Department of Library and Information Science, Vidyasagar University

<b>Title of the Paper</b>	<b>Name of Author(s) &amp; Affiliation(s)</b>
Agentic AI for Library Transformation: A Case Study of User Interface Design for Improved Services	<b>Irfan Mallick</b> Resource Person, Rani Rashmoni Green University, Hooghly  <b>Dr. Ranjan Samanta</b> Librarian, Naba Ballygunge Mahavidyalaya, Kolkata
Community-Centric Intelligent Libraries: Exploring the Role of AI in Advancing Market Intelligence and Economic Resilience of GI-Tagged Handicraft Community in West Bengal	<b>Biman Baral</b> JRF, DLIS, Vidyasagar University  <b>Dr. Nivedita Bhattacharyya Sahu</b> Professor, DLIS, Vidyasagar University
Understanding Learners' Information Source Horizon in the Age of AI: In Context of Everyday Life Information Seeking	<b>Dr. Avik Roy</b> Librarian, Derozio Memorial College, Kolkata 700136
Machine Learning Applications in Information Retrieval Systems: A Scientometric Analysis of Patent Data and Cited Scholarly Works	<b>Goutam Dinda</b> Research Scholar, DLIS, Rabindra Bharati University
Understanding Student's Perception of Artificial Intelligence in Academic Library Services: A Study	<b>Biswajit Modak</b> Librarian, Saheed Nurul Islam Mahavidyalaya

Generation Z Learners' Experiences of Artificial Intelligence	<b>Rakhi Bar</b> Librarian, Bilsara Sadharan Pathagar <b>Dr. Subarna Kumar Das</b> Professor, Jadavpur University
Conception and Utilization of AI Tools Among Gen Z in Semi Urban and Rural Areas of Uluberia Subdivision: A Survey	<b>Tanushree Rakshit</b> Librarian, Uluberia College, Uluberia, Howrah, West Bengal
Role of Artificial Intelligence in Academic Learning and Library Utilization by College Students: A Survey Study	<b>Dr. Swapan Khan</b> Librarian, Narasinha Dutt College, Howrah, West Bengal <b>Bikash Kumar Halder</b> Librarian, Rabindra Mahavidyalaya, Champadanga, Hooghly
<b>Technical Session – II (Parallel)</b> <b>Time: 03:00 P.M. – 04:00 P.M.</b>	
<b>Chairpersons</b> <b>Smt. Shrabana Ghosh</b> Chief Librarian (Offg.) Central Library, Jadavpur University & <b>Dr. Tapan Barui</b> Assistant Professor Dept. of Library & Information Science, University of North Bengal	
<b>Title of the Paper</b>	<b>Name of Author(s) &amp; Affiliation(s)</b>
Liposome-Based Targeted Therapy for Rheumatoid Arthritis: a Scientometric Analysis	<b>Anwasha Bhattacharya</b> Librarian. Acharya Jagadish Chandra Bose College, Kolkata
A Text Mining Analysis of Indian Library and Information Science Blogs Through Topic Modelling	<b>Mithun Das</b> Ph.D Scholar, DLIS, The University of Burdwan <b>Dr. Rajesh Das</b> Assistant Professor, DLIS, The University of Burdwan
Role of Libraries in Sustainable AI Development	<b>Dr. Pallabi Sarkar</b> Librarian, Kishore Bharati Bhagini Nivedita College (Co-Ed)

Implementing an Automated Subject Indexing System for Future Libraries: A Machine Learning Approach Using Annif Tool	<b>Tapas Roy</b> PhD Scholar, DLIS, The University of Burdwan <b>Dr. Rajesh Das</b> Assistant Professor, DLIS, The University of Burdwan
Media Literacy, Cyber Awareness, and Open Educational Resources (OERs): Enhancing Responsible Information Use in the Digital Age	<b>Md. Manirul Islam</b> Ph.D. Scholar, DLIS, Niilm University, Kaithal, Haryana
The Silicon Shelf: The Legal and Ethical Dilemma of Artificial Intelligence Under DPDP Framework in India	<b>Sagar Sherpa</b> Tufanganj Mahavidyalaya, Coochbehar
Applications of Artificial Intelligence in Community Information Services of Public Libraries	<b>Dr. Sayantani Majumder</b> Librarian, Samhati Granthagar, 9, B.T. Road, North 24 Parganas, West Bengal <b>Dr. Subarna Kumar Das</b> Professor, Department of Library & Information Science, Jadavpur University
Everything You Need to Know About Elicit AI: A Complete Overview for Modern Researchers	<b>Dipali Sing</b> Guest faculty, RRGU, Hooghly
AI in Public Libraries	<b>Trisha Das</b> MLIS Student, DLIS, Jadavpur University
AI-Powered Fashion Libraries	<b>Arja Chakraborty</b> Student, BLIS, DLIS, Jadavpur University, Kolkata
<b>Session: Panel Discussion</b> <b>Time: 04:00 P.M. – 05:00 P.M.</b>	
<b>Moderator</b> <b>Dr. Subarna Kumar Das</b> Professor Department of Library and Information Science, Jadavpur University	
<b>Panelists</b> <b>Dr. Samir Kr. Jalal</b> Deputy Librarian Central Library, IIT Kharagpur	

**Dr. Sudip Ranjan Hatua**

Professor

Department of Library and Information Science, Rabindra Bharati University

**Dr. Sushanta Banerjee**

University Librarian

West Bengal State University, Kolkata

**Dr. Narayan Chandra Ghosh**

Librarian

Indian Institute of Management, Calcutta

**End of Day 1**

**Date: 21.02.2026**

**Session: National Digital Library of India**

**Time: 10:30 A.M. – 12:00 P.M.**

**Speaker**

**Dr. Bablu Sutradhar**

Librarian

Indian Institute of Technology Kharagpur

**Session: Special Invited Lecture**

**Time: 12:00 P.M. – 12:30 P.M.**

**Chairperson**

**Dr. Barnali Roy Choudhury**

Assistant Professor

Department of Library and Information Science, Netaji Subhas Open University

**Speakers**

**Dr. Nimai Chand Saha**

Librarian

Visva-Bharati

&

**Shri Biswajit Pan**

Manager & Head

Big Data Software Engineer & Architect with AI Specialist, Walmart

**Session: 50<sup>th</sup> Study Circle**

**Time: 12:30 P.M. – 01:30 P.M.**

**Chairperson**

**Dr. Arun Kumar Chakraborty**

Professor

Department of Library & Information Science, Netaji Subhas Open University

**Speaker**

**Dr. Shantanu Ganguly**

Director

HDFC Library, Ashoka University

**Session: Health Awareness Session**

**Time: 01:30 P.M. – 01:45 P.M.**

**LUNCH: 01:45 P.M. - 02:30 P.M.**

**Technical Session – III**

**Time: 02:30 P.M. – 03:30 P.M.**

**Chairpersons**

**Dr. Arabinda Maity**

Professor

Dept. of Library & Information Science, University of Calcutta  
&

**Smt. Subhasree Chakraborty**

Associate Professor

Dept. of Economics & IQAC Coordinator, Muralidhar Girls' College, Kolkata

**Invited Speakers**

**Dr. Bidyarthi Dutta**

Associate Professor

Department of Library and Information Science, Vidyasagar University  
&

**Dr. Sibsankar Jana**

Professor

Department of Library and Information Science, University of Kalyani

Title of the Paper	Name of Author(s) & Affiliation(s)
A Review of Artificial Intelligence (AI) in Library and Information Services During the Digital Era	<b>Malay Kanti Pramanik</b> Librarian of Dhali Institute of Teacher Education
Some Aspects of Policy Framework Towards Application of Artificial Intelligence (AI) For Open University Libraries in India to Achieve Sustainable Development Goal Four (SDG4) Agenda of United Nations: A Study	<b>Dr Madhusri Ghosh Upadhyay</b> Deputy Librarian, Netaji Subhas Open University
From Automation to Intelligence: A Web-Based Analytical Study on the Application of Artificial Intelligence in Modern Library Management	<b>Dr. Swapan Khan</b> Librarian, Narasinha Dutt College, 129, Belilious Road, Howrah <b>Dr. Pronobi Porel</b> Librarian, Rabindra Mahavidyalaya, Champadanga, Hooghly
Strategic AI Integration for Service Optimization in Libraries: A Collaborative Perspective	<b>Samhati Soor</b> Librarian, Heramba Chandra College
Impact of Artificial Intelligence (AI) on Academic Libraries Services and Management: A study	<b>Biswajit Jana</b> Assistant Librarian Bishop's College <b>Sanjay Mondal</b> Assistant Librarian Sister Nivedita University <b>Dr. Subarna Kumar Das</b> Professor, DLIS, Jadavpur University
Empowering Accessibility: The Role of Free Artificial Intelligence Tools in Braille Digitization	<b>Kajinur Rahaman Ali</b> Research Scholar, University of Gour Banga <b>Swapnanil Chatterjee</b> Research Scholar, University of Gour Banga <b>Juboraj Roy</b> Research Scholar, University of Gour Banga <b>Dr. Biswajit Das</b> University Librarian & Registrar (a/c), University of Gour Banga
Artificial Intelligence (AI) in Library Ecosystem: Prospects and Constraints	<b>Sheuli Sengupta</b> Librarian, G.M.S.M. Mahavidyalaya, Bireswarpur, West Bengal

Measurement of the Accuracy of Subject Headings Generated by AI tools with Special Reference to LCSH	<p><b>Rakhi Dhibar</b> Research Scholar, DLIS, Rabindra Bharati University</p> <p><b>Dr. Sudip Ranjan Hatua</b> Professor and Head, DLIS, Rabindra Bharati University</p>
<p><b>Technical Session – III (Parallel)</b> <b>Time: 02:30 P.M. – 03:30 P.M</b></p>	
<p><b>Chairpersons</b></p> <p><b>Dr. Koushik Ghosh</b> Assistant Librarian Visva-Bharati &amp; <b>Dr. Biswajit Das</b> Librarian &amp; Registrar (Additional Charge) University of Gour Banga</p>	
Title of the Paper	Name of Author(s) & Affiliation(s)
A Study on Strengths and Weaknesses of Artificial Intelligence Applications Used to Library Operations	<p><b>Kousik Samanta</b> Library Assistant, Central Library, Kazi Nazrul University, Asansol</p> <p><b>Dr. Rajesh Das</b> Assistant Professor, DLIS, The University of Burdwan</p>
Artificial Intelligence (AI) in Academic Libraries: A Mixed-Methods Study of AI Applications, Opportunities and Challenges	<p><b>Sourav Mazumder</b> Librarian, Ghoksadanga Birendra Mahavidyalaya, West Bengal</p> <p><b>Dr. Tapan Barui</b> Assistant Professor, DLIS, University of North Bengal</p>
The Evolution of Communication Systems: From Smoke Signals to AI, and its Applications in Library & Information Science	<p><b>Saroj Mondal</b> Research Scholar, DLIS, RKDF University, Ranchi &amp; Librarian of Jamini Roy College, Beliatare, Bankura</p>
Leveraging Web Tools for Efficient Resource Management and Distribution in KVS School Libraries	<p><b>Tanmay Mondal</b> Librarian, PM Shri Kv Ballygunge</p>

From Stacks to Intelligence: Navigating the AI-Transformed Library Ecosystem	<p><b>Arpan Dutta</b> Student, BLIS, University of North Bengal</p> <p><b>Debonita Mukherjee</b> Student, BLIS, University of North Bengal</p> <p><b>Riya Chakladar</b> Student, BLIS, University of North Bengal</p>
Transforming Library Operations Through Artificial Intelligence: Tools, Applications and Challenges in Indian Libraries	<p><b>Dr. Ranjan Samanta</b> Librarian, Naba Ballygunge Mahavidyalaya</p> <p><b>Anindita Ghosh</b> Ex- Student, DLIS, Rabindra Bharati University</p>
AI Applications in Library Operations	<p><b>Shantana Mistry</b> Ex-Student, DLIS, Jadavpur University</p>
Integrating AI in a Socially Responsible Manner	<p><b>Sukhda</b> BLISc Student, DLIS, Jadavpur University</p>
Explainable Artificial Intelligence for Transparent Information Retrieval Systems in Libraries	<p><b>Smriti Sakar</b> Student, DLIS, Jadavpur University</p>
Information Seeking Behaviour in AI-Based Discovery Systems: Trust, Bias, and Transparency	<p><b>Rana Saha</b> Student, DLIS, Jadavpur University</p>
Artificial Intelligence in Digi-Pata: A Digital Archiving of Patachitra of Naya Gram (Patachitra Village) in Paschim Medinipur District of West Bengal	<p><b>Dr. Sanjukta Sahoo</b> Librarian, Debra Thana S.K.S Mahavidyalaya Debra, Paschim Medinipur, 721124</p>
<p><b>Valedictory Session</b> <b>Time: 04:00 P.M. – 05:00 P.M.</b></p>	
<p><b>Chairperson</b> <b>Dr. Saptarshi Ghosh</b> Professor and Head Department of Library and Information Science, North Bengal University</p> <p><b>Valedictory Address</b> <b>Dr. Samaresh Bhattacharya</b> Professor Department of Chemistry, Jadavpur University</p>	

**Report by Rapporteur-General**

**Dr. Soumen Mondal**

Librarian, Prasanta Chandra Mahalanobis Mahavidyalaya, Kolkata

**Vote of Thanks**

**Dr. Atanu Das**

Librarian, Vivekananda College for Women, Barisha, Kolkata

**Certificate Distribution**



# ABSTRACTS

## **Some Aspects of Policy Framework Towards Application of Artificial Intelligence (AI) For Open University Libraries in India to Achieve Sustainable Development Goal Four (SDG4) Agenda of United Nations: A Study**

**Dr Madhusri Ghosh Upadhyay**

Deputy Librarian, Netaji Subhas Open University

***Abstract:***

To achieve sustainable development goal four of 2030 agenda of United Nations, libraries of open universities are providing access to information resources both physically and virtually. These libraries are giving safe space to the learners for continuation of life-long learning. Scholars can extensively use these libraries to conduct their research. AI has become a part in the world of academia and supporting intelligent, adaptive and personalised learning systems in the universities around the world. There are various aspects, such as policy questions which were raised by the academicians, faculty members, researchers also some social and ethical implications are real concern today. Huge numbers of learners are enrolled in the open universities of India. They are scattered across the country. Due to some reasons, they are unable to take admission in regular universities. These learners are not all the time getting access to their faculty members like regular universities. Only option to clear their doubts is to attend personal contact programme (PCP) which are also arranged for a very limited period. Library is the only solution for in depth study. In open universities faculty members are engaged in writing self-learning materials, MOOCS etc. AI technologies such as natural language processing, speech recognition, image recognition, data mining, artificial creativity may be of help for open university libraries for serving diverse types of learners, faculty members and scholars. This paper tries to various aspects towards policy framework on implementation of AI and which may be useful for open university libraries in India.

***Keywords:*** *Artificial Intelligence, Open Universities Libraries, Sustainable Development Goal, natural language processing, speech recognition, image recognition, data mining, artificial creativity, self-learning material, MOOCS.*

## **Artificial Intelligence on Publication: Trends of Library Literature**

**Dr. Chaitali Ghosh**

Librarian, School of Education Technology, Jadavpur University

**Ankita Sanyal**

College Librarian, Sarojini Naidu College for Women, Kolkata

***Abstract:***

Artificial Intelligence (AI) is most popular term and getting more attention in Library related publication in recent years. This study provides a trend analysis of year-wise publication, country-wise publication, type of documents publication, co-authorship of publication, citation trends and keyword co-occurrence related to library oriented literature. This study explores the variation of publication across country, collaboration, citation thresholds and keyword frequency. The study also highlights how AI became popular day by day and popularity varies internationally.

***Keywords:*** *Artificial Intelligence, Library, Publication, Trend analysis*

## **Measuring Interdisciplinarity of the Articles on “Application Of AI on LIS” Using Diversity-Based Indicator**

**Poulami Pal**

Research Scholar, DLIS, University of Kalyani, Nadia

**Prof. Sibsankar Jana**

Professor, Department of Library & Information Science, University of Kalyani, Nadia

### ***Abstract:***

Measuring interdisciplinarity using text corpus involves employing Natural Language Processing (NLP) and machine learning techniques to analyze the language and semantic content of documents, rather than solely relying on traditional bibliometric methods like co-citations, co-occurrence, co-authorships etc. The core idea is the blending of specialized vocabularies from different fields indicates the association of ideas, concepts, theories, and methods, which is defining the characteristics of interdisciplinarity. Semantic analysis can be used to quantify the interdisciplinarity by using contextual understanding and knowledge integration within research. The purpose of the study is to evaluate the interdisciplinarity of the publications on AI application on LIS domain based on diversity index. In this paper, Term Frequency-Inverse Document Frequency (TF-IDF) weighting and cosine similarity are used to find the text-based diversity index. The data has been collected from Web of Science and are analyzed using R software. Using document term matrix and TF-IDF value, similarity matrix and distance matrix are being determined, and based on these, the values of interdisciplinarity have been calculated. The measured value of interdisciplinarity is 0.9392695 i.e. highly interdisciplinary area of research. Highly interdisciplinary research area creates more diverse knowledge base. Text-based interdisciplinarity measurement technique reveals how the knowledge integrates.

**Keywords:** Interdisciplinarity, cosine similarity, document term matrix, TF-IDF value, semantic analysis.

## **Analyzing the publications on Model Context Protocol indexed on OpenAlex: An application of Data Carpentry**

**Tirtharaj Dasgupta**

Junior Research Fellow, DLIS, University of Kalyani, Kalyani, Nadia

### ***Abstract:***

AI Agents are omnipresent nowadays. They are able to boost workflows and execute tasks by using the reasoning power of the large language models (LLMs) and the functionality of tools. Model Context Protocol is one of the most important agentic AI protocols that standardizes the way LLMs connect with tools, prompts and database to perform tasks. Its architecture, first proposed by Anthropic, included three components, namely MCP Host, MCP Client and MCP Server. It has shown capabilities in designing conversational search systems for library discovery layers, digital libraries, etc. This analytical study focuses on understanding various attributes of publications on Model Context Protocol, indexed on OpenAlex. It uses a data carpentry-based approach to analyze the open access status, nature and year of publications, citations received, altmetric attention. It also uses AI to generate subject terms and translations of the subject and abstracts of the publications in Indian languages, to generalize the awareness of the topic to the general Indian audience.

**Keywords:** *Model Context Protocol (MCP), Artificial Intelligence (AI), Large Language Model (LLM), Data Carpentry, OpenRefine, OpenAlex*

## **Measurement of the Accuracy of Subject Headings Generated by AI tools with Special Reference to LCSH**

**Rakhi Dhibar**

Research Scholar, DLIS, Rabindra Bharati University

**Dr. Sudip Ranjan Hatua**

Professor and Head, DLIS, Rabindra Bharati University

### ***Abstract:***

Subject headings in library science are standardized, controlled vocabulary terms (words/phrases) used to describe the subject matter of library materials, acting as crucial access points in catalogues to help users find resources on specific topics efficiently. Still, this is challenging, especially when following standardized subject headings such as Library of Congress Subject Headings (LCSH). Recently, Artificial Intelligence (AI) tools have been discussed to automate library operations easily. In this context, the present research employs an experimental approach to evaluate the effectiveness of utilizing AI tools for automated subject assignment. In this study, the titles of several selected academic books were selected and used with AI tools—such as ChatGPT, Gemini, and DeepSeek—to generate subject heading suggestions. Each Title as instructed “identify appropriate Library of Congress Subject Headings (LCSH) using standard LCSH syntax... Use ONLY Library of Congress Subject Headings (not free keywords).” The resulting subject headings were then compared and verified against the authorized LCSH headings available in the Online Public Access Catalogue of the Library of Congress. For ease of analysis, the subject headings were categorized into three groups: complete match, partial match, and no match. This study demonstrates that AI tools can play a supportive role in the subject assignment process, but the professional judgment and quality control of human catalogers remain essential. In the future, AI-based subject assignment could become more effective through the combination of improved training data and controlled vocabularies.

**Keywords:** *Library of Subject Headings (LCSH), Automated Subject Assignment, AI tools, AI-assisted Indexing*

## **Artificial Intelligence (AI) in Academic Libraries: A Mixed-Methods Study of AI Applications, Opportunities and Challenges**

**Sourav Mazumder**

Librarian, Ghoksadanga Birendra Mahavidyalaya, West Bengal

**Dr. Tapan Barui**

Assistant Professor, DLIS, University of North Bengal

### ***Abstract:***

The purpose of the study is to examine research papers on Artificial Intelligence (AI) in academic libraries. The study used a combination of bibliometric and content analysis of 242 research papers retrieved from the Dimensions AI database. Results revealed research trends and significant contributors (e.g., top sources of publications and authors). The study linked AI applications to opportunities and associated challenges. It presents a comprehensive conceptual understanding of AI in academic libraries. The study provides implications for library professionals, institutional heads of operations, and policymakers for ethical use of AI.

**Keywords:** *Intelligent library system; Artificial intelligence training; Library innovation; Technology integration; User-centric service*

## **Cognitive Vulnerabilities in the Age of Information: Biases that propagate Misinformation**

**Jaya Sharma**

Research Scholar, DLIS, Jadavpur University

**Dr. Udayan Bhattacharya**

Professor, DLIS, Jadavpur University

### ***Abstract:***

Cognitive biases play a pivotal role in enabling the rapid spread of misinformation in the information age. As individuals navigate an overwhelming volume of digital content, they often rely on mental shortcuts that compromise critical evaluation. Cognitive biases like confirmation bias, the availability heuristic, familiarity bias, and many other biases shape how information is interpreted and influence the selective sharing of misleading narratives. Emotional reasoning further heightens vulnerability by elevating affectively charged misinformation over evidence-based content. These biases are amplified by digital platforms whose algorithmic structures prioritize engagement, creating echo chambers that reinforce pre-existing beliefs and normalize repeated falsehoods. This article illustrates how human cognitive tendencies interact with technological systems to perpetuate the acceptance and dissemination of misinformation. It argues that addressing this challenge requires not only technological interventions but also the cultivation of critical digital literacy skills and metacognitive awareness.

***Keyword:*** Cognitive Bias, disinformation, fake news, misinformation

## **Opinion of Young Generations about AI-Based ICT Applications in Higher Education: A Case Study in an Academic Library of an Institution**

**Rumpa Pal**

Librarian, Vidyanagar College, South 24 Parganas, West Bengal

### ***Abstract:***

Some years ago, we are using the word 'digital age'. Now we are entered and concerned about the word 'AI age'. Many survey works were done recently – where it can be seen that implementation of AI brings fear of job loss. After completing higher education, students are seeking for job. But almost market, job places are occupied by AI technologies. There is no essential the human presence. Almost all industries are trying to manage manufacturing work to office work by using AI tools. Recruitments are only possible who are eligible, expert, aware about AI-based tools, who have extraordinary knowledge and who can handle AI-based machines. In rural areas of West Bengal, students are willing to start earning just after passing undergraduate level. And it is also true that students may not use AI tools till now, but they use social media platforms. So, they should have knowledge about AI-based materials. In this situation, it is necessary to realize what our new generation thinks. In the working field, they are like a new born baby. They need guidance to use AI effectively and safely without hampering themselves and other life. So, it is also necessary to know our institutions have the capability to educate their students or not. This study tries to know the thoughts of students about AI and activities of institutional pillars (Government, institutional administrator, etc.). Activities of teachers and librarians of an academic institution for capacity building of students are also considered in this study.

***Keywords:*** AI-based Tools, ICT Applications, Higher Education, Young Generation, College Students, Vidyanagar College

## **Impact of Artificial Intelligence (AI) on Academic Libraries Services and Management: a study**

**Biswajit Jana**

Assistant Librarian Bishop's College

**Sanjay Mondal**

Assistant Librarian Sister Nivedita University

**Dr. Subarna Kumar Das**

Professor, DLIS, Jadavpur University

### ***Abstract:***

Traditional library services are being revolutionized by artificial intelligence (AI), which presents chances for efficient and high-quality service delivery through AI-powered platforms. Many library operations and services might be automated by artificial intelligence, giving patrons round-the-clock help in fulfilling their information needs. As a result, libraries frequently incorporate artificial intelligence into their daily operations and services. Examining the present level of knowledge about libraries and artificial intelligence can help to confirm this further. AI and libraries are significantly connected; however, the understanding and effects of AI on academic researchers in library services continue to raise questions explored in this paper. This research will assist policy stakeholders, librarians, and academics in the field to tackle these concerns prior to the implementation of AI in library services

**Keywords:** *Artificial Intelligence, Academic libraries, Smart Libraries, Library Management, Automation, Digital Libraries*

## **Artificial Intelligence (AI) in Library Ecosystem: Prospects and Constraints**

**Sheuli Sengupta**

Librarian, G.M.S.M. Mahavidyalaya, Bireswarpur, West Bengal

### ***Abstract:***

Artificial Intelligence (AI) is emerging as a transformative force, increasingly reshaping the functions, services, and strategic orientation of libraries worldwide. This paper critically explores the prospects and constraints of AI applications in library contexts, examining their influence on user engagement, information access, resource management, and institutional sustainability. AI-enabled tools—including intelligent discovery systems, recommendation engines, conversational chatbots, automated metadata generation, predictive analytics, and digital preservation technologies—offer significant prospects for enhancing accessibility, personalization, operational efficiency, and evidence-based decision-making. Conversely, AI deployment is circumscribed by significant ethical, technical, financial, and professional challenges. Ethical concerns such as data privacy, surveillance risks, algorithmic bias, and lack of transparency coexist with practical constraints including financial burden, dependence on proprietary systems, infrastructural disparities, and limited professional expertise. Furthermore, evolving regulatory environments, questions of accountability, interoperability complexities, and sustainability issues intensify the uncertainties surrounding long-term integration. The study argues that responsible integration of AI requires strategic planning, institutional capacity building, policy compliance, transparency mechanisms, and user-centric design. Overall, AI presents both transformative promise and critical obligation: libraries can harness its potential meaningfully only through ethical deployment, inclusive implementation strategies, and continuous evaluation to ensure equitable, accountable, and sustainable information ecosystem.

## **Empowering Accessibility: The Role of Free Artificial Intelligence Tools in Braille Digitization**

**Kajinur Rahaman Ali**

Research Scholar, University of Gour Banga

**Swapnanil Chatterjee**

Research Scholar, University of Gour Banga

**Juboraj Roy**

Research Scholar, University of Gour Banga

**Dr. Biswajit Das**

University Librarian & Registrar (a/c), University of Gour Banga

### ***Abstract:***

This research paper examines the transformative impact of free artificial intelligence (AI) tools on Braille digitization and conversion. As the demand for accessible information for visually impaired individuals increases, Braille digitization becomes crucial for advancing educational and social inclusion. The study reviews recent advancements in AI-driven solutions that automate the translation, recognition, and conversion of both printed and digital texts into Braille. It assesses the effectiveness, accuracy, and accessibility of various free AI tools, emphasizing their potential to democratize information access by reducing barriers inherent in traditional Braille production. The paper further addresses challenges in implementing these tools, including language support, format compatibility, and user-friendliness, and proposes directions for future research and development. Overall, the findings indicate that free AI technologies can substantially enhance information accessibility for the global visually impaired community.

***Keywords:*** *Braille Digitization, Braille Conversion, Artificial Intelligence Tools*

## **Information Seeking Behaviour in AI-Based Discovery Systems: Trust, Bias, and Transparency**

**Rana Saha**

Student, DLIS, Jadavpur University

### ***Abstract:***

The rapid integration of Artificial Intelligence (AI) into information discovery systems has significantly transformed information-seeking behaviour (ISB). AI-based discovery systems such as intelligent search engines, recommender systems, and digital library platforms employ algorithms to personalize information access, enhance retrieval efficiency, and support decision-making. However, this transformation raises critical concerns related to user trust, algorithmic bias, and system transparency. This paper examines how AI-based discovery systems influence information-seeking behaviour, with special emphasis on the roles of trust, bias, and transparency. It discusses the changing interaction between users and intelligent systems, identifies key challenges, and highlights implications for library and information science professionals. The study concludes that building transparent, unbiased, and trustworthy AI systems is essential for ethical and effective information access in the digital age.

***Keywords:*** *Information Seeking behaviour (ISB), Artificial Intelligence (AI), Discovery Systems, Trust, Bias, Transparency, Library Information Science (LIS).*

## **Influential Capital Expenditures on Academic Persuasion and Research Activities Affecting NIRF-Rank for the University of Calcutta**

**Dr. Pubalika Bhattacharya Maitra**

Assistant Professor, Dept. Of Library and Information Science, University of Calcutta

**Robama Mostafa**

Research Fellow, Dept. Of Library and Information Science, University of Calcutta.

### **Abstract:**

This study investigates the influence of capital investment on library development, faculty capacity, and sponsored research activities in a top-ranked NIRF university. Using data obtained from the NIRF portal, for the period 2019–2024, the analysis incorporates annual capital expenditure on libraries, seminar and workshop funding, faculty strength, and sponsored project allocations. The findings reveal that although investment levels varied across years, their impact on institutional performance was substantial, with higher capital allocation generally supporting stronger research activity and academic infrastructure. However, some institutions displayed performance outcomes that did not fully correspond to their expenditure patterns, indicating the presence of additional organizational and strategic factors. The study here highlights the importance of targeted and strategic resource allocation in strengthening research capacity, improving academic quality, and enhancing national and international rankings. The results underscore that sustained investment in knowledge infrastructure and faculty development is essential for long-term institutional growth and competitiveness, offering valuable insights for administrators and policymakers in planning future higher-education investments.

**Keywords:** *NIRF, Financial outcomes of Calcutta University and NIRF, NIRF Rankings and University of Calcutta at Financial*

## **Role of Libraries in Sustainable AI Development**

**Dr. Pallabi Sarkar**

Librarian, Kishore Bharati Bhagini Nivedita College (Co-Ed)

### **Abstract:**

The challenges posed by urbanization, climate change, and resource depletion have led to the imperative for sustainable development in the present scenario. In this regard, the integration of Artificial Intelligence (AI) technologies offers unprecedented opportunities to revolutionize the planning, design, construction, and management of our daily lives. This paper explores the multifaceted role of AI in driving sustainable development and management, examining its potential to enhance efficiency, resilience, and environmental performance. Artificial Intelligence is already an integral part of our digital daily lives, as we navigate through social networks, use our GPS, or consult recommendations on e-commerce websites. Due to its pervasive influence across all sectors of our societies, AI is gradually becoming a pivotal subject in terms of regulation, societal direction, and legislation. Libraries also continue to enjoy a high level of trust and appreciation in most of their communities. Understanding AI thus constitutes a new cornerstone for accessing the necessary information to advance sustainable development. This study will try to understand the role libraries to promote and offer relevant literacy of AI to propose avenues for implementing concrete actions.

**Keywords:** *Library, Artificial Intelligence, Information Literacy, Sustainable Development, AI Literacy.*

## **A Text Mining Analysis of Indian Library and Information Science Blogs Through Topic Modelling**

**Mithun Das**

Ph.D Scholar, DLIS, The University of Burdwan

**Dr. Rajesh Das**

Assistant Professor, DLIS, The University of Burdwan

### ***Abstract:***

The blogs have become primary channels of academic communication and professional discourse in Library and Information Science (LIS). Specifically, Indian LIS blogs indicate the changing trends, professional issues and technological advancements in the field. This paper employs the topic modelling method to identify thematic trends in selected Indian LIS blogs published between 2020 and 2025. The research identifies the most predominant topics using Latent Dirichlet Allocation (LDA) and assesses their importance. It explains how they can be applied to LIS education, practice, and research. The results indicate a significant interest in information literacy, digital libraries, academic librarianship, open access, and professional development, as well as the role of blogs as a source of informal yet powerful knowledge dissemination.

**Keywords:** Library and Information Science, Blogs, topic modelling, LDA, text mining, India.

## **From Information Literacy to AI Literacy: Reconfiguring User Competencies in Library-Mediated Knowledge Systems**

**Dr. Sohini Sengupta**

Librarian, Seth Anandram Jaipuria College, Kolkata

### ***Abstract:***

Artificial Intelligence (AI) is rapidly transforming the global information ecosystem, reshaping the ways in which information is created, organized, retrieved, evaluated, and disseminated. Libraries and information systems increasingly rely on AI-driven technologies such as algorithmic discovery tools, recommender systems, chat bots, automated metadata generation, sentiment analysis, and predictive analytics. While these developments enhance efficiency, scalability, and personalization, they simultaneously introduce complex challenges related to transparency, algorithmic bias, ethical accountability, surveillance, and user agency. In this context, AI literacy has emerged as a critical extension of information and digital literacy, demanding renewed attention from the field of Library and Information Science (LIS). This paper examines AI literacy among users from an LIS perspective, emphasizing its conceptual foundations, multidimensional competencies, ethical implications, and pedagogical significance. It argues that LIS professionals are uniquely positioned to promote AI literacy as a democratic, ethical, and inclusive practice that empowers users to critically engage with intelligent information systems. The study conceptualizes AI literacy as a holistic competence encompassing conceptual understanding, algorithmic awareness, ethical reasoning, and practical engagement with AI tools. The paper concludes by proposing a strategic and archetype role for libraries in embedding AI literacy within information literacy programs, user education initiatives, and lifelong learning frameworks, thereby strengthening informed citizenship and equitable access to knowledge in the age of AI.

**Keywords:** AI literacy, Library and Information Science, information literacy, digital literacy, algorithmic awareness, ethical AI, user education

## **Community-Centric Intelligent Libraries: Exploring the Role of AI in Advancing Market Intelligence and Economic Resilience of GI-Tagged Handicraft Community in West Bengal**

**Biman Baral**

JRF, DLIS, Vidyasagar University

**Dr. Nivedita Bhattacharyya Sahu**

Professor, DLIS, Vidyasagar University

### ***Abstract:***

In the contemporary world, alongside food, shelter and clothing, access to the right information at the right time has become a fundamental need for individuals to survive and actively engage in a democratic society. Over time, libraries have been considered the hub of disseminating reliable information without any discrimination. The craft community of this society is the bearer of tacit knowledge, utilising their intellectual freedom, philosophical depth, and aesthetic sense to produce tangible heritages that reflect our native artistic expression to the world. But these artisans-specially younger generations- are becoming disinterested in continuing this work as they are facing several interlinked challenges like market access, price exploitation, declining traditional skill, raw material shortage, lack of branding, social marginalization and all of these because of lack of information literacy, digital divide, and broader socio-economic, informational and technological shifts in this digital age with the blind acceptance of modernization and westernization. Drawing from secondary data, this paper examines how AI-embedded Intelligent libraries protect and promote the indigenous artistry of West Bengal by facilitating access to relevant information to artisans and enhancing their information as well as economic resilience. The findings of this study underscore that the development of community-centric intelligent libraries bridges the existing information gap by providing access to information on market trends, changing customer preferences, modern designs, e-commerce platforms, and legal and ethical policies, among others, with the help of AI. Furthermore, integration of local language and voice-based search services enhances the ability to acquire information for the rural illiterate artisans. This conceptual study concluded with an integrated community-centric intelligent library model within the LIS framework that urges policymakers and LIS professionals to take actionable insights to safeguard and empower the native handicraft community.

***Keywords:*** AI, Market Intelligence, Handicraft Community, GI- Tagged, Economic Resilience

## **Conception and Utilization of AI Tools Among Gen Z In Semi Urban and Rural Areas of Uluberia Subdivision: A Survey**

**Tanushree Rakshit**

Librarian, Uluberia College, Uluberia, Howrah, West Bengal

### ***Abstract:***

Artificial Intelligence (AI) is an excellence of science which is implemented in almost every sphere of the society. The young generations have emerged and to some extent dependent on AI in their daily life. In India, a highly populated country where digital divide is a real problem, the conception and utilisation of AI is not acceptable to every corner of the society. The light of technological advancement cannot enlighten every corner of the society. In this research paper, the focus is about the condition of young generations of semi urban and rural areas of West Bengal regarding the conception and utilization of AI.

***Keyword:*** AI, Generation Z, AI tools, Uluberia subdivision, Howrah district

## **Understanding Learners' Information Source Horizon in the Age of AI: In Context of Everyday Life Information Seeking**

**Dr. Avik Roy**

Librarian, Derozio Memorial College, Kolkata 700136

### ***Abstract:***

Dianne Sonnenwald has proposed her seminal concept of Information Horizon (IH) in the year 1999 and Reijo Savolainen, J. Kari, A. Roy and other proponents of everyday life information seeking (ELIS) have adopted the concept of IH in order to better understand the information seeking practices of different groups of people in the society since then. However, the literature of ELIS does not divulge any significant findings about how people in the present age of Artificial Intelligence (AI) conceptualise their IH or information source horizon (ISH). The present investigation using Micro-moment Time Line interview and Critical Incident technique methods bridges this knowledge gap and explores 60 undergraduate and post-graduate students' ELIS and their ISH with an emphasis on their placing of different information sources such as ChatGPT, Gemini etc., Internet, institutional and human in the IH framework proposed by Sonnen Wald. It has been observed that the students have placed a great trust on using ChatGPT and other similar models while accessing their academic as well as non-academic information seeking since they inculcate a practice of seeking their problem-solving information, that is, mastery of life by using different AI models including ChatGPT, Gemini etc. The study also reveals significant findings that the students hardly put any trust on institutional and organisational sources such as libraries etc. in their ELIS and building ISH.

***Keywords:*** *information source horizon, information horizon, artificial intelligence, everyday life information seeking, AI models, information practice*

## **Artificial Intelligence in Digi-Pata: A Digital Archiving of Patachitra of Naya Gram (Patachitra Village) in Paschim Medinipur District of West Bengal**

**Dr. Sanjukta Sahoo**

Librarian of Debra Thana S.K.S Mahavidyalya Debra, Paschim Medinipur, 721124

### ***Abstract:***

Pata Chitra is a living local art of West Bengal and Orissa. In West Bengal, the art is generally found in Nayagram (Patachitra Village) in Pingla Thana of Paschim Medinipur district. Digi-Pata is a digital platform of Patachitras of Naya Gram. In the Digi-Pata, the Patachitras and Pater Gan of awarded patuas (Chitrakar) of Nayagram has deposited and a Digital Archiving facility has given to the Chitrakars to archive their creations digitally as well as to recognize themselves globally. Awarded patuas has selected by the selective survey method in Nayagram. After selecting the awarded Patuas or Chitrakar, it will start a survey for data collection (Pata Chitra Image Collection and Pater Gan Collection). After collecting the images and songs of Patuas, a repository has develop to archive them. Digital preservation has started through a website with proper domain name and a user interface with proper pop-up menus. In Digi-Pata, Artificial Intelligence is used at the time of Metadata Creation and at the retrieval of Patachitras and Pater Gan. In this valuable database patachitras of awarded Patuas of Nayagram is in our hand. This digital transition will help to reach of Nayagram's Patuas beyond local fairs to global online platforms, ensuring economic sustainability and global recognition of patuas of Nayagram.

***Keywords:*** *Patachitra, Nayagram, AI, Digital Archiving*

## **A Study on Strengths and Weaknesses of Artificial Intelligence Applications Used to Library Operations**

**Kousik Samanta**

Library Assistant, Central Library, Kazi Nazrul University, Asansol

**Dr. Rajesh Das**

Assistant Professor, DLIS, The University of Burdwan

### ***Abstract:***

The applications of Artificial Intelligence (AI) technologies in library operations have significantly changed user services and information management. This article investigates the Strengths and Weaknesses of Artificial Intelligence adoption in library operations. The research design was a literature study with data analysis using descriptive analysis methods. The results show a promising future for the strengths of Artificial Intelligence technologies in enhancing library operations efficiency, user support, data analysis, and resource accessibility. Nonetheless, weaknesses such as financial constraints, inadequate technical infrastructure, worries about data privacy, and skill gaps among library staff are acknowledged. These difficulties highlight the necessity of collaborative partnerships, legislative frameworks, and capacity building programs to enable responsible AI inclusion in library operations. The study comes to the conclusion that artificial intelligence has enormous potential to improve library operations despite the challenges. There are suggestions for resolving the noted weaknesses and optimizing the strengths of implementing AI in library operations environments.

**Keywords:** *Artificial Intelligent (AI), AI Application in Library, AI Base Library Operations, Intelligent Library, Digital Libraries.*

## **Smart Libraries: Embracing an AI-Driven Future in Higher Education and Building AI Skills**

**Nabonita Rakshit**

Student, M.LIB.I.SC, Rabindra Bharati University

### ***Abstract:***

Smart libraries are becoming vital centres of knowledge in higher education by using artificial intelligence (AI) to improve learning, research, and information services. This paper looks at what smart libraries are and how tools powered by AI-like smart search systems, chat-bots, predictions, automated cataloguing, and tailored recommendations-are changing how libraries operate and how users interact with them. It shows how smart libraries help in making decisions based on data, improve access to online resources, and create services that focus on users in academic settings. The study also points out the need for librarians, faculty, and students to build their AI skills so they can work well with these smart systems. Initiatives for Capacity Building, such as digital literacy training, professional development, and promoting Ethical AI, are seen as critical to the Sustainable Development of Smart Libraries. Other topics addressed include leading challenges such as Data Privacy, Algorithmic Biases, Gaps in Infrastructure, also the requirement of having Institutional Policy Frameworks. This research further identifies that through Libraries' active partnership with Higher Education Institutions to foster AI Education & Innovation, Smart Libraries will serve as a significant component in preparing Higher Education Institutions for an AI Driven Future.

**Keywords:** *Smart libraries, AI Education & Innovation, Institutional Policy, librarians, faculty, AI Driven*

## **AI-Enabled Smart Circulation and Inventory Management Systems in Academic Libraries**

**Jayashree Patra**

Librarian (Department of Science and Commerce), J. D. Birla Institute, Kolkata

**Pritish Chandra Bal**

Research Scholar, Department of Library and Information Science, Jadavpur University

**Prof. (Dr.) Subarna Kumar Das**

Department of Library and Information Science, Jadavpur University, Kolkata

### ***Abstract:***

The purpose of this study is to explore the role of Artificial Intelligence (AI) in enhancing circulation and inventory management systems in academic libraries. It aims to examine how AI-driven tools can address operational inefficiencies, improve resource control, and support data-informed decision-making in contemporary library environments. The study follows a conceptual and descriptive research approach, based on a critical review of existing literature, professional reports, and current practices in library automation. A conceptual framework is proposed to illustrate the integration of AI technologies such as RFID, intelligent analytics, and library management systems for smart circulation and inventory operations. The study is expected to demonstrate that AI-enabled circulation and inventory systems can significantly improve accuracy, efficiency, and responsiveness in academic libraries. Anticipated outcomes include real-time stock verification, reduced material loss, predictive usage analysis, automated alerts, and enhanced service delivery, leading to optimized resource utilization and improved user satisfaction. This study is limited to a conceptual and literature-based analysis without empirical validation, field implementation, or primary data collection, which may restrict the generalizability of its findings to real-world library settings. This study contributes original value by presenting a focused conceptual framework specifically addressing circulation and inventory functions – areas often underrepresented in AI–library research. It bridges theoretical understanding and professional practice, offering practical insights for academic libraries planning to transition toward intelligent library ecosystems.

**Keywords:** *AI; Smart Circulation; Inventory Management; Academic Libraries; RFID Systems*

## **The Evolution of Communication Systems: from Smoke Signals to AI, and its Applications in Library & Information Science**

**Saroj Mondal**

Research Scholar, Dept. of Library and Information Science, RKDF University, Ranchi

&

Librarian of Jamini Roy College, Beliatore, Bankura

### ***Abstract:***

In this paper attempts to identify remarkable milestone of Evolution of Communication Systems: from Smoke Signals to AI, and its Applications in Library & Information Science. Now the newest technologies is artificial intelligence (AI) is the main burning topic. It has been linked with many professions, including software industry, business, military, health, and education, library and information science and library services etc. The best services in the era of information technology can be transformed by artificial intelligence (AI), a technology that is frequently used in libraries. The purpose of this study is to study communication system and demonstrate how AI developed and it is used in library.

**Keywords:** *Artificial intelligence (AI); AI Library; online services; Machine learning*

## Application of AI in Digital Archives

**Dr. Mohitosh Das**

Librarian, Serampore College, University of Calcutta

### **Abstract:**

Digital archives of rare documents preserve cultural heritage, various governmental records, scientific information, and other important documents for future generations. It preserves and disseminates the manuscript heritage, ensuring cultural resilience and promoting inclusive access to heritage resources. However, organizing the very old, rare, and fragile documents and making them available to the user community presents challenges for us in restoration, digitization, metadata generation, and long-term preservation. The potential technology, like Artificial Intelligence (AI), offers technological applications to enhance efficiency in the restoration of damaged documents, converting the image into machine-readable and searchable text, and long-term preservation of rare documents. Furthermore, a significant portion of digitized archival images suffers from quality degradation, caused by aging materials, environmental exposure, physical damage, and limitations of early digitization technologies. Present AI-based advanced technology, especially Convolutional Neural Networks (CNNs), has introduced powerful automated solutions for enhancing the quality of archival images at scale. It enables effective image denoising, deblurring, contrast enhancement, super-resolution, and restoration of damaged or degraded archival material. This research article explores the applications of AI in digital archives, including CNN-driven machine learning techniques in automated image enhancement for digital archives. It also explores the process of readability improvement, efficient accessibility, metadata extraction, and long-term preservation. It also discusses ethical considerations, limitations, and future research directions.

**Keywords:** *Digital Archives, Artificial Intelligence, Convolutional Neural Networks (CNNs), Manuscript.*

## Everything You Need to Know About Elicit AI: A Complete Overview for Modern Researchers

**Dipali Sing**

Guest faculty, RRGU, Hooghly

### **Abstract:**

Elicit AI is a research-focused artificial intelligence tool designed to assist scholars in managing and streamlining the academic workflow. It automates essential tasks such as identifying relevant literature, summarizing academic papers, extracting key concepts, and organizing information into clear and usable formats. This paper presents a comprehensive overview of Elicit AI, describing how the tool functions, the features that make it valuable, and the ways in which it supports researchers throughout the process of academic writing and investigation. It highlights the practical benefits of using Elicit, including improved efficiency, clearer understanding of complex texts, and better organization of research materials. The paper also examines the tool's limitations, such as gaps in database access, occasional inaccuracies, and the necessity of human oversight. By offering a balanced examination of these aspects, the paper aims to provide modern researchers with a clear, accurate, and complete understanding of Elicit AI and its usefulness in contemporary academic work.

**Keywords:** *Elicit AI, Research Assistant, Artificial Intelligence, Academic Writing, Literature Review, Research Tools, Automation, Academic Workflow*

## **Faculty Preparedness and Institutional Challenges in AI Capacity Building**

**Akash Hazra**

MLISc Student, DLIS, Jadavpur University, Kolkata, India

### ***Abstract:***

Artificial Intelligence (AI) is a rapidly developing trend which is transforming the landscape of the higher education sector by offering new opportunities in the field of teaching, assessment, management, and institutional management. Despite the revolutionary opportunities that AI presents, it remains highly reliant on the willingness of the faculty and the capacity that is developed within the institution to accept AI. The paper will look at the level at which members of the faculty will readily accommodate AI into teaching and learning activities and how institutional schisms to developing AI capacity in higher education inhibit the use of AI. The method used in the paper is a qualitative, interpretive one since it is based on the literature, one of which is a study of the AI-led institutional change, digital teacher competencies, and qualitative research methods. The results indicate that even though faculty awareness of the application of AI tools has been heightened, the gap in pedagogical preparedness, understanding of ethics and technical expertise remains quite enormous. Some of the problems at the institutional level include poor infrastructure, incompetence in the development of the profession, ambiguity, and resistance to change in the organization's policy. The article states that the comprehensive approach to capacity-building, which integrates leader development, ongoing professional training, positive policies, and ethical governance, should be considered as the sustainable solution to the introduction of AI. The research paper ends by stating that to balance the aspect of AI integration with the aim of education, there must be a strategic planning of the institutions to protect the integrity and fairness of education.

**Keywords:** Artificial Intelligence, faculty preparedness, institutional challenges, capacity building, higher education

## **The Silicon Shelf: The Legal and Ethical Dilemma of Artificial Intelligence under DPDPA Framework in India**

**Sagar Sherpa**

Tufanganj Mahavidyalaya, Coochbehar

### ***Abstract:***

The metaphor "Silicon Shelf" is used for AI-driven libraries to represent the blend of traditional physical repositories with the advanced digital and automated systems. The AI-driven technology in libraries is used for personalised recommendations, automated reference and cataloguing, predictive analytics, and user behaviours, including reading habits, search patterns, and user preferences. This article explores the complex intersection of AI development in the libraries and the Digital Personal Data Protection Act (DPDPA), 2023 India's first comprehensive data protection framework. It examines the principles of DPDPA like purpose limitation, data minimization and the user's right to access, correction and erasure, and the legal and ethical dilemma of Indian data governance and AI-driven libraries as "Data Fiduciaries".

**Keywords:** Artificial Intelligence, Silicon Shelves as Libraries, DPDPA 2023, Data Fiduciaries, Data Privacy, Digital Ethics, Digital Jurisprudence, India.

## **AI-Powered Assistive Technologies: Enhancing Information Access and Independence for Persons with Disabilities Across Global and Indian Markets**

**Subham Das**

JRF, DLIS, Jadavpur University, Kolkata-32

**Dr. Udayan Bhattacharya**

Professor, DLIS, Jadavpur University, Kolkata-32

### ***Abstract:***

Fast-paced developments in Artificial Intelligence (AI) are transforming assistive technologies (AT), providing unprecedented degrees of independence and inclusion for individuals with disabilities. This review delves into the market-available AI-based assistive solutions for different types of disabilities encompassing vision, hearing, mobility, communication, and neurodiversity. We highlight key global products in conjunction with the emerging "Made-in-India" ecosystem, describing their functionality and primary AI uses. A main emphasis is how these technologies in particular increase access to information, allowing individuals to interact more fully with digital and physical resources. We also address the important role libraries and community centers play in making these life-enhancing products more widely available in a way that spurs awareness, adoption, and equitable access. Their main challenges in their large-scale implementation and future directions in both international and Indian markets are also discussed.

**Keywords:** *AI, Assistive Technology, Disability Inclusion, Smart Glasses, Smart Canes, Braille Devices, Sign Language Translation, Wearable Robotics, Accessible India Campaign, Libraries*

## **Strategic AI Integration for Service Optimization in Libraries: A Collaborative Perspective**

**Samhati Soor**

Librarian, Heramba Chandra College

### ***Abstract:***

Artificial Intelligence (AI) has the potential to transform service delivery in the library, enhancing efficiency, accuracy, accessibility and personalization. However, the mere adoption of AI does not guarantee optimal outcomes. This paper argues that strategic integration, guided by deliberate planning, policy alignment and human intervention, is essential to realize the full benefits of AI in library services. Adopting a collaborative perspective, the study emphasizes the indispensable role of librarians as mediators, ethical stewards and facilitators of AI-driven processes. It explores current AI applications in cataloguing, indexing, discovery systems, recommendation engines, digital transcription and preservation, highlighting how these tools can optimize services maintaining trust and quality. The paper also examines the challenges and risks of AI adoption, including algorithmic bias, misinformation, lack of transparency and the potential erosion of human expertise. The study demonstrates that collaboration between AI and human expertise is key to service optimization. Ultimately, the paper provides insights into how AI integration can optimize library services while enhancing operational efficiency as well as maintaining ethical standards in shaping the future of library services.

**Keywords:** *AI in Libraries, Service Optimization, Strategic AI Integration, Human-AI Collaboration, Ethical Governance*

## **Explainable Artificial Intelligence for Transparent Information Retrieval Systems in Libraries**

**Smriti Sakar**

Student, DLIS, Jadavpur University

### ***Abstract:***

The growing use of Artificial Intelligence (AI) in library Information Retrieval Systems (IRS) has transformed how users search, access, and interact with information resources. AI-driven systems enhance efficiency, relevance ranking, and personalization; however, opaque “black-box” nature raises concerns about transparency, trust, bias, and ethical accountability. Explainable Artificial Intelligence (XAI) emerges as a vital solution by providing clear and understandable explanations of how retrieval decisions and search results are generated. In library, XAI helps users comprehend why specific documents are retrieved and ranked, thereby improving confidence and satisfaction with digital library services. It also supports librarians in evaluating system performance, identifying algorithmic bias, and ensuring fair and equitable access to information. By aligning AI-based retrieval mechanisms with core library values such as openness, neutrality, and user empowerment, XAI promotes responsible and user-centered information services. This abstract emphasizes the importance of XAI in developing transparent, ethical, and trustworthy information retrieval systems for modern libraries.

**Keywords:** *Information Retrieval Systems (IRS), Artificial Intelligence (AI), Discovery Systems, Library Information Science (LIS).*

## **Visualizing the Intellectual Structure of AI in Library Science: A Bibliometric and Network Analysis**

**Debolina Biswas**

SRF, DLIS, Jadavpur University

**Rupali Rupasmita Pradhan**

SRF, DLIS, Jadavpur University

### ***Abstract:***

This study explores the rapidly evolving research landscape at the intersection of Artificial Intelligence (AI) and Library and Information Science (LIS). Through a bibliometric and thematic analysis of publications indexed in Scopus from 2024 to 2025, this paper maps the intellectual structure, key themes, and emerging trends in this dynamic field. The analysis examines publication trends, influential authors and sources, geographical contributions, funding patterns, and keyword co-occurrence networks. Findings indicate a significant surge in AI-LIS research, driven by themes such as generative AI, ethical challenges, AI adoption models, precision services, and the role of libraries in the AI era. The United States and China emerge as leading contributors, with strong interdisciplinary engagement across computer science, social sciences, and engineering. The study identifies AI ethics, explainable AI, and AI-integrated service models as motor themes, while highlighting research gaps in Global South perspectives and standardized ethical frameworks. This synthesis provides a foundational overview for researchers, librarians, and policymakers navigating the integration of AI into library ecosystems.

**Keywords:** *Artificial Intelligence (AI), AI in Libraries, Generative AI, AI Ethics, Bibliometric Analysis, Thematic Mapping, Digital Libraries, Research Trends.*

## **From Automation to Intelligence: A Web-Based Analytical Study on the Application of Artificial Intelligence in Modern Library Management**

**Dr. Swapan Khan**

Librarian, Narasinha Dutt College, 129, Belilious Road, Howrah

**Dr. Pronobi Porel**

Librarian, Rabindra Mahavidyalaya, Champadanga, Hooghly

### ***Abstract:***

The rapid advancement of Artificial Intelligence (AI) has significantly influenced the evolution of library management systems, transforming traditional libraries into intelligent, user-centric knowledge environments. This study examines the application of AI in library management through a qualitative analysis of secondary data collected from diverse internet sources, including scholarly articles, professional reports, library association publications, institutional websites, and AI service providers.

The primary objective of the research is to identify major AI technologies employed in contemporary libraries and to analyse their functional roles across core library operations such as acquisition, cataloguing, circulation, reference services, and digital information retrieval. Using a thematic content analysis approach, AI applications were systematically categorized and mapped to corresponding library functions to reveal emerging patterns of adoption and innovation.

The findings indicate that AI tools – particularly machine learning algorithms, natural language processing, chatbots, and recommendation systems – have enhanced operational efficiency, improved metadata quality, enabled personalized user services, and supported data-driven decision-making in libraries. However, the study also highlights critical challenges, including data privacy concerns, algorithmic bias, infrastructural constraints, and the need for upskilling library professionals.

The paper concludes that while AI offers substantial opportunities for improving library management and service delivery, its effective implementation requires strategic planning, ethical awareness, and continuous professional development. This study contributes to the existing LIS literature by presenting a functional, web-based analytical perspective on AI adoption in libraries and by proposing a conceptual understanding of AI-driven library management practices.

***Keywords:*** *Artificial Intelligence, AI, library management, Information Technology, AI Tools, Library Automation, Emerging Technologies, Personalized services*

## **Agentic AI for Library Transformation: A Case Study of User Interface Design for Improved Services**

**Irfan Mallick**

Resource Person, Rani Rashmoni Green University, Hooghly

**Dr. Ranjan Samanta**

Librarian, Naba Ballygunge Mahavidyalaya, Kolkata

### ***Abstract:***

The adoption of agentic Artificial Intelligence (AI) is creating new opportunities for the transformation of library services by lowering technical barriers and supporting the rapid development of user-centered digital solutions. This paper presents a case study on the application of an agentic AI-based Integrated Development Environment (IDE) to design and implement a chatbot-enabled digital reference service for a University Library website without manual coding. The study is based on data and functional requirements derived from the digital reference tools of the Jadavpur University Library website. Using a case study research methodology, the paper examines the processes of User Interface (UI) generation, customization and deployment through natural-language interactions with an agentic AI platform. The findings indicate that agentic AI substantially reduces the technical workload of library professionals by eliminating reliance on traditional code-centric development approaches. Platforms such as Google Antigravity enable the creation of customized library services with minimal programming expertise, allowing libraries to quickly prototype and deploy intelligent reference services. The case study further demonstrates that a fully functional and customized digital reference webpage can be developed through a limited number of AI-mediated interactions. Additionally, the paper offers a brief comparative overview of other freely available agentic AI tools applicable to library services. Overall the study underscores the transformative potential of agentic AI-driven User Interface Design (UID) in enhancing the accessibility, efficiency, and scalability of contemporary library services.

**Keywords:** *Agentic AI; Library Transformation; UI Design; Digital Reference Service; Chatbot; Integrated Development Environment ; Intelligent Library Systems*

## **Integrating AI in a Socially Responsible Manner**

**Sukhda**

BLISc Student, DLIS, Jadavpur University, Kolkata, India

### ***Abstract:***

As Artificial Intelligence (AI) transitions from a specialized tool to a ubiquitous infrastructure, the urgency for socially responsible integration has never been higher. This paper examines the multi-faceted challenges of deploying AI within ethical and legal frameworks. By analyzing current algorithmic biases, data privacy concerns, and the evolving global regulatory landscape, the study identifies a "responsibility gap" between technological capability and social accountability. The findings suggest that a "Human-in-the-Loop" (HITL) approach, combined with proactive legal compliance and transparent data governance, is essential for fostering public trust and ensuring that AI serves as a catalyst for equitable societal progress rather than a source of systemic harm.

**Keywords:** *Artificial Intelligence, AI Ethics, Algorithmic Bias, Data Governance, Responsible AI, Legal Frameworks, Human-Centric Design.*

## **Applications of Artificial Intelligence in Community Information Services of Public Libraries**

**Dr. Sayantani Majumder**

Librarian, Samhati Granthagar, 9, B.T. Road, North 24 Parganas, West Bengal, India

**Dr. Subarna Kumar Das**

Professor, DLIS, Jadavpur University, Kolkata- 700032, West Bengal, India.

### ***Abstract:***

Artificial Intelligence (AI) is rapidly transforming the public libraries to deliver community information services. In recent years, AI-based technologies have been increasingly adopted to enhance service efficiency, user engagement, and access to information. Tools such as chatbots, virtual reference assistants, personalized recommendation systems, and data analytics enable public libraries to better understand community information needs and provide timely, relevant, and customized services. These applications support improved decision-making and allow libraries to design targeted programs that address the diverse needs of their users. AI also plays an important role in strengthening community outreach and inclusion. Language translation tools, assistive technologies for persons with disabilities, and adaptive learning platforms help libraries reach underserved and marginalized populations. By reducing barriers related to language, physical access, and digital skills, AI contributes to more equitable access to information and learning opportunities within the community. This paper examines the applications, benefits, and challenges of AI in public library community information services and highlights strategies for responsible and inclusive implementation aligned with the core values of public libraries.

***Keywords:*** *Artificial Intelligence; Public Libraries; Community Information Services; User Engagement, Inclusive Outreach; Digital Equity*

## **AI Applications in Library Operations**

**Shantana Mistry**

Ex-Student, DLIS, Jadavpur University

### ***Abstract:***

We are aware of the fact that new technology is constantly improving in all industry organisations, and library science is also not lagging in that direction. The main purpose of artificial intelligence is to improve the computer systems of libraries so that libraries can work very smoothly. This article is an overview of Artificial Intelligence in the Library Service. Artificial Intelligence helps us to automate the entire cataloguing and classification process without any errors. Artificial intelligence-driven tools such as machine learning solutions, chatbots, predictive analytics, and automated indexing systems will help librarians manage vast quantities of information with clarity and efficiency. Artificial Intelligence has created new avenues and possibilities for the advancement of research in various academic fields. They are including special types of systems in the reference service, as well as designing robots to read books and decorate shelves. The implementation of Artificial Intelligence is significantly enhancing the library activities and services, which is gradually increasing the importance of libraries in the digital society. The study also highlights the benefits of Artificial Intelligence, such as improved accuracy skills, as well as cost efficiency and data privacy issues. The conclusion of this study is that it is possible to manage a library that is sustainable for intelligent users in this digital era if artificial intelligence can be implemented properly.

***Keywords:*** *Artificial Intelligence, Computer, Service, Library Automation,*

## **Evolving Influence of AI in Library Operations: An Analysis of Scholarly Research Trends**

**Dr. Santashree Basu**

Guest Faculty, Jadavpur University

### ***Abstract:***

The incorporation of Artificial Intelligence (AI) in the domain of Library Science has significantly contributed towards transforming the traditional library system. The evolution from mere repositories to a dynamic hub of knowledge organisation, AI has impacted almost every aspect of a library. Library Operations includes any activity that is carried out in a library for its smooth functioning and providing unhindered library services to the users. Influence of AI in every section of library operations: Acquisition, Technical Processing as well as Library Services have become an important area of scholarly research over the years. This study aimed to analyze the growing scholarly research trends on the influence of AI in library operations. In doing so the paper attempted to make a comprehensive literature review; analysed the content of fifty most cited papers and then conducted a bibliometric study on influence of AI in library operations. In doing so data were retrieved from the Scopus database and analysed using the Bibliometrix package in R (Biblioshiny) and VOSviewer to map publication trends, productive sources, authorship pattern, collaborative networks institutional productivity, country-wise contributions, and keyword co-occurrence. This study will provide an overview of the emerging research directions for researchers, practitioners, and policymakers on the evolution of AI application in different library operations.

***Keywords:*** *AI, Library Operations, Content Analysis, Metric Analysis, Publication Trends*

## **From Conventional to Intelligent Libraries: Skill Development Challenges for Librarians**

**Ditu Bhungia**

Research Scholar, DLIS, Jadavpur University

**Sonali Dutta**

Research Scholar, DLIS, Jadavpur University

**Prof. (Dr) Subarna Kumar Das**

Professor, DLIS, Jadavpur University

### ***Abstract:***

This research explores the transformation of libraries from traditional, physical information centers to intelligent, technology-enabled knowledge hubs in the digital age. It looks at how new technologies like automation, data analytics, artificial intelligence (AI), and the Internet of Things (IoT) are changing professional roles, user expectations, and library services. The study identifies the main obstacles that librarians must overcome in order to acquire the abilities required to function successfully in intelligent libraries, such as deficiencies in digital literacy, technological competence, and continual professional development. It also covers obstacles including resource limitations, opposition to change, and a lack of institutional support. The paper makes the case that librarians must pursue ongoing education and strategic skill development in order to stay current and adaptable to changing user needs. This will allow them to change from being traditional information custodians to clever collaborators and service innovators within smart library ecosystems.

***Keywords:*** *Traditional Library, Skill Development, AI, Internet of Things (IoT)*

## **Implementing an Automated Subject Indexing System for Future Libraries: A Machine Learning Approach Using Annif Tool**

**Tapas Roy**

PhD Scholar, DLIS, The University of Burdwan

**Dr. Rajesh Das**

Assistant Professor, DLIS, The University of Burdwan

### ***Abstract:***

Traditional subject indexing is the intellectual assignment of controlled vocabulary terms (e.g., LCSH, SLSH, Thesaurus, UDC, MeSH, DDC) to library resources. Although it is a fundamental component of information retrieval, it faces significant challenges related to time, money, and inter-indexer consistency. Applying the open-source Annif (Automated Subject Indexing Framework) tool, this article presents the implementation and efficiency of an Automated Subject Indexing System as a scalable method for future library operations. Employing a machine learning (ML) text classification approach, Annif models (e.g., fastText, Omikuji, TensorFlow, etc.) were trained on a corpus of existing bibliographic records to learn the mapping between document text (title, abstract) and authoritative subject headings. This studies suggest that the Annif-based ASIS achieves an exceptionally high level of accuracy while providing significant efficiency gains, as well as decreasing the subjectivity and labour intensity of manual indexing. This article concludes by proposing a semi-automated integration model for Library Management Systems (LMS) to transition cataloguing workflows, positing that ML-driven ASIS is essential for maintaining high-quality subject access in the era of exponential information growth.

**Keywords:** *Library Automation, Subject Indexing, Machine Learning, Annif, Future Libraries, Information Retrieval, Text Classification.*

## **AI in Public Libraries**

**Trisha Das**

MLIS Student, DLIS, Jadavpur University

### ***Abstract:***

Public libraries around the world are beginning to use artificial intelligence (AI) to improve services and efficiency. AI refers to computer systems that can learn from data (through techniques like machine learning and natural language processing) and perform tasks such as analysing information or automating work. This article reviews how AI is being applied in public libraries globally, with special focus on India. This research used a literature review of recent studies, reports, and case examples. Key AI applications include automated cataloguing, enhanced search and discovery, virtual assistants (chatbots), accessibility tools, and personalized recommendations. These technologies can help libraries serve diverse communities – for example, simplifying searches in many languages and offering 24/7 help via chatbots. Benefits of AI include greater efficiency, improved user experience, and better access to information (such as through digitization and preservation). However, challenges such as limited infrastructure, staff training needs, data security, and ethical issues must be addressed carefully. Based on the literature, this study suggests that library leaders and policymakers invest in technology, develop staff skills, and create clear policies. By associating AI tools with user needs and library missions, public libraries (in India and elsewhere) can leverage AI to extend their role as trusted community knowledge centres.

**Keywords:** *AI, Public Libraries, Library Services, Digital Library, Library Automation, Technology Adoption.*

## **Transforming Library Operations Through Artificial Intelligence: Tools, Applications and Challenges in Indian Libraries**

**Dr. Ranjan Samanta**

Librarian, Naba Ballygunge Mahavidyalaya (College)

**Anindita Ghosh**

Ex- Student, DLIS, Rabindra Bharati University

### ***Abstract:***

The objective of this study is to examine and compare the application of Artificial Intelligence (AI) tools in library operation systems in India and to evaluate their impact on efficiency, service quality and user engagement in comparison with conventional library management systems. The study adopts a descriptive and comparative research methodology based on an extensive review of scholarly literature, professional reports and documented case examples from Indian libraries. Various AI-driven technologies such as machine learning, chatbots, automated cataloguing, recommendation systems, optical character recognition (OCR) and intelligent search engines, are analyzed across core library functions including acquisition, classification, circulation, reference services, digital archiving and user interaction.

This research is significant as it provides a systematic overview of the emerging role of AI in modernizing Indian library operations. It addresses the growing need for libraries to adopt intelligent systems to meet evolving user expectations in a digital information environment. The findings reveal that AI-enabled library systems outperform traditional systems in terms of operational efficiency, accuracy, scalability and personalized user services. AI applications significantly enhance search and retrieval processes, automate routine tasks and improve decision-making. However, the analysis also identifies major challenges in the Indian context including infrastructural limitations, shortage of skilled manpower, financial constraints and ethical concerns related to data privacy and algorithmic transparency.

The study adds value by offering a comparative framework that can assist library administrators, policymakers and information professionals in understanding the practical benefits and limitations of AI adoption in libraries. It also highlights strategic considerations necessary for effective implementation.

The study concludes that while the adoption of AI tools holds immense potential for transforming library operation systems in India, successful integration requires strategic planning, capacity building, adequate funding, and supportive institutional policies. AI-based library systems can play a crucial role in enhancing service delivery and ensuring the long-term sustainability and relevance of Indian libraries in the digital age.

***Keywords:*** Artificial Intelligence (AI), Library Operation Systems, AI Tools, Digital Libraries, Library Management Systems

## **Machine Learning Applications in Information Retrieval Systems: A Scientometric Analysis of Patent Data and Cited Scholarly Works**

**Goutam Dinda**

Research Scholar, DLIS, Rabindra Bharati University

### ***Abstract:***

The integration of machine learning (ML) technologies into information retrieval (IR) systems has transformed the way digital information is organized, accessed, and utilized across libraries, research institutions, and enterprises. This study presents a patent-driven and scholarly citation analysis to map global innovation trends in ML enabled IR systems between 2000 and 2024, using Lens.org as the primary data source. A total of 370 patent documents and 356 cited scholarly works were retrieved. The study employs a Scientometrics approach, analyzing annual trends, leading inventors, assignees, technological classifications, citation impact, and emerging innovations. Findings indicate a steady growth of patents and publications, reflecting heightened research and industrial activity in AI-driven IR systems. Key areas of innovation include deep learning-based search algorithms, semantic retrieval, recommendation systems, and intelligent indexing methods, emphasizing enhanced accuracy, personalization, and efficiency in information retrieval. The analysis of cited scholarly works highlights foundational research, algorithmic advancements, and application frameworks that have influenced technological development. The study provides actionable insights for library professionals, researchers, and R&D managers by identifying dominant technologies, leading contributors, and emerging trends in ML-enabled IR systems. It also demonstrates the value of integrating patent data with scholarly literature to obtain a comprehensive perspective on innovation landscapes and knowledge diffusion in the IR domain.

**Keywords:** *Machine Learning, Information Retrieval Systems, Patent Analytics, Scholarly Citation Analysis, Semantic Search*

## **Liposome-Based Targeted Therapy for Rheumatoid Arthritis: a Scientometric Analysis**

**Anweshha Bhattacharya**

Librarian, Acharya Jagadish Chandra Bose College, Kolkata

### ***Abstract:***

Liposome-based targeted drug delivery has received increasing attention in rheumatoid arthritis research due to its potential to improve therapeutic efficacy while reducing systemic toxicity. Although studies in this area span pharmacology, nanomedicine, and clinical research, a focused quantitative overview of the literature remains limited. The present study undertakes a scientometric analysis of research on liposome-mediated targeted therapy for rheumatoid arthritis using publications indexed in the PubMed database. The analysis examines publication trends over time, leading journals, institutions and frequently occurring keywords to understand the structure and development of this specialised research area. Shifts in thematic emphasis are also explored to reflect evolving research priorities. The findings indicate a steady growth of scholarly output, increasing collaborative research and a concentration of publications within a limited number of biomedical journals. By outlining the research landscape, the study identifies emerging themes and potential gaps, offering useful insights for researchers working in targeted drug delivery and rheumatoid arthritis therapy.

**Keywords:** *Liposome-based drug delivery; Rheumatoid arthritis therapy; Targeted drug delivery; Scientometric analysis.*

## **Evolving Competency Requirements for Library Professionals in the Age of Artificial Intelligence**

**Nilanjana Mondal**

SRF, DLIS, Jadavpur University

**Dr. Subarna Kumar Das**

Professor, DLIS, Jadavpur University

### ***Abstract:***

The study looks at the potential effects of Artificial Intelligence (AI) and Generative AI on the job patterns and roles of library staff in India. It aims to explore how AI changes daily tasks and specialized functions, such as information literacy, data management and collection curation, in the Indian academic and public library systems.

The research uses a hermeneutic literature review, combining current scholarly discussions and new trends. This approach assesses how library work in India is changing, specially the move from traditional librarianship to services that include AI.

The findings show that Generative AI will greatly change the roles of information literacy trainers, managers and data specialists in India. The study identifies a critical need for an 'AI Literacy' competency framework to address the transition toward Smart libraries. While AI offers immense potential for automating routine tasks, it necessitates a shift in professional focus toward high-level human-centric services.

The study acknowledges that the exact pace of AI adoption in India is difficult to predict due to varying levels of institutional funding and technical infrastructure. Socially, it highlights the risk of a widening 'Digital Divide' within the library landscape. It argues that without localized AI training and policy development, resource-poor institutions may fall behind, whereas equitable AI integration could serve as a powerful tool for bridging existing information gaps.

This paper provides a timely reflection on AI's impact specifically the library landscape in India. it appears to fill a gap in the existing literature by introducing a resourceful way of viewing competency mapping in the context of the Indian Global South.

***Keywords:*** AI, Library Competencies, Smart Libraries, Digital Equity, Skill Mapping.

# **AI-Enabled Analysis of Semantic Overlap in Scholarly Communication Using Thematic and Similarity Analysis in Library and Information Science: A Conceptual Framework**

**Riya Karmakar**

Research Scholar, University of Kalyani

**Prof. Sibsankar Jana**

Professor, Department of Library and Information Science, University of Kalyani, Nadia,

## ***Abstract:***

As scholarly communication continues to expand, it has brought increasing concern about the repetition of similar ideas across studies, the production of redundant knowledge, and the fragmented dissemination of research findings. Traditional bibliometric techniques, such as keyword co-occurrence and citation-based indicators, offer useful insights into publication trends but have limited ability to capture deeper idea-level redundancy. They focus mainly on surface-level text patterns rather than on conceptual similarity.

This study uses artificial intelligence (AI) to detect semantic overlap within the field of Library and Information Science (LIS), focusing on open access research. A corpus of research articles was compiled using title and abstract metadata to support large-scale and ethically compliant text analysis.

The analysis follows a two-part approach. First, semantic similarity between documents is measured using Sentence-BERT (SBERT) embeddings combined with cosine similarity, which makes it possible to identify conceptual proximity beyond simple lexical repetition. Second, topic modeling is used to map thematic structures in the literature and to highlight clusters of research where overlapping ideas are concentrated.

The comparative results show that AI-based semantic similarity identifies higher levels of conceptual overlap than traditional text-based approaches. The thematic clustering further reveals specific areas of LIS research where redundancy in knowledge production appears more prominent.

These findings demonstrate the value of AI-supported evaluation frameworks for strengthening research quality, reducing redundant dissemination practices, and supporting informed editorial decision-making in scholarly communication. The study proposes a practical methodological framework for identifying semantic overlap using neural embedding models and thematic analysis, offering useful implications for LIS researchers, journal editors, and research evaluation systems.

***Keywords:*** *Scholarly Communication, Semantic Similarity, Sentence-BERT (SBERT), Research Overlap Detection, Cosine Similarity, TF-IDF, LIS Research.*

## **Artificial Intelligence in Scholarly Communication: Transformations, Opportunities, and Challenges**

**Dr. Abhijit Chatterjee**

Librarian, Seth Anandram Jaipuria College

**Dr. Anwesha Chatterjee**

Librarian, Purnidevi Chowdhury Girls' College

### ***Abstract:***

Artificial Intelligence (AI) is rapidly redefining the processes through which scholarly knowledge is created, evaluated, disseminated, and preserved. This paper critically examines the expanding role of AI across the scholarly communication lifecycle, including literature discovery, research design, academic writing, peer review, publishing workflows, and research impact assessment.

Drawing on a qualitative synthesis of recent scholarly literature, policy documents, and publisher practices, the study highlights how advances in machine learning, natural language processing, and predictive analytics have enhanced efficiency, accessibility, and research visibility within global academia. At the same time, the paper identifies significant challenges related to academic integrity, algorithmic bias, transparency, authorship accountability, and the emergence of AI-generated scholarly misconduct. Particular attention is given to ethical guidelines, governance mechanisms, and regulatory responses shaping responsible AI adoption in research ecosystems.

The study argues that while AI has strong potential to democratize scholarly communication and reduce structural barriers—especially for researchers in under-resourced regions—its benefits can only be realized through transparent policies, human-centered oversight, and robust ethical safeguards.

The paper contributes to international scholarly discourse by presenting a balanced assessment of AI as both an enabling infrastructure and a disruptive force in contemporary academic communication.

***Keywords:*** *Artificial Intelligence; Scholarly Communication; Academic Publishing; Peer Review; Research Integrity; Ethics*

## **Generation Z Learners' Experiences of Artificial Intelligence**

**Rakhi Bar**

Librarian, Bilsara Sadharan Pathagar

**Dr. Subarna Kumar Das**

Professor, DLIS, Jadavpur University

### ***Abstract:***

The present study offers a qualitative and empirical examination of how Generation Z (individuals born between 1995 and 2009) perceive and engage with artificial intelligence (AI), with particular emphasis on their everyday experiences. An exploratory research design was employing a structured questionnaire to systematically capture students' perceptions, attitudes, and patterns of AI use. The study involved a sample of 40 male and female students drawn from colleges and universities across West Bengal. The findings suggest that participants demonstrate a strong awareness of AI technologies and regularly interact with AI-enabled tools in both educational and personal contexts. Their perspectives reveal a layered understanding of AI, marked by optimism regarding its capacity to improve learning processes, increase efficiency, and broaden access to information. At the same time, participants articulated concerns surrounding data privacy, ethical implications, overreliance on AI systems, and the possible weakening of independent thinking. These insights illustrate the coexistence of positive expectations and critical apprehensions in Generation Z's engagement with AI. By empirically foregrounding student perspectives from a regional Indian context, the study contributes to a more nuanced understanding of the social and cultural factors shaping attitudes toward AI. The findings highlight the importance of integrating AI literacy, ethical considerations, and governance frameworks to support responsible and informed use of AI technologies.

***Keywords:*** *Artificial Intelligence, AI, Generation Z, West Bengal, AI Technologies*

## **Understanding Student's Perception of Artificial Intelligence in Academic Library Services: A study**

**Biswajit Modak**

Librarian, Saheed Nurul Islam Mahavidyalaya

### ***Abstract:***

The emergence of Artificial Intelligence (AI) has revolutionized numerous sectors including libraries. From intelligent cataloging to personalized recommendations, AI provides opportunities to enhance services, streamline operations and engage users more meaningfully. AI-powered tools and technology transform library operations through intelligent search engines, automated cataloging, personalized learning support and predictive user analysis. This paper intends to analyze and understand student's perception of the use of AI in academic library services by conducting research and survey of a group of undergraduate (UG) students of Saheed Nurul Islam Mahavidyalaya, West Bengal of varied departments of humanities and science, through 'questionnaire method'. This paper intends to find out UG student's responses on the awareness on AI tools usage and applications including in college libraries, awareness and literacy on AI and their perception on the use of AI in library services and sustainability and scope of such usage for future. The data so obtained would be interpreted statistically using various statistical tables and diagrams, to get a vivid and simpler view of the student's perception of the use of AI-tools and applications, particularly in the field of academic library services. This paper finally provides an insight into student's view on the benefits of using AI in library services and major drawbacks, if any.

***Keywords:*** *Streamline Operations, Academic Library, Student's Perception, AI- Powered Tools.*

# **Building the Future Mind: Evolving Higher Education to Meet the Demands of the AI Era**

**Debkanta Halder**

Researcher, Department of Library and Information Science, Jadavpur University

## ***Abstract:***

The integration of artificial intelligence into higher education institutions represents a transformative shift in how knowledge is created, disseminated, and applied in the 21st century. This report examines the critical role of AI capacity building in higher education, exploring how universities and colleges are developing the infrastructure, skills, and frameworks necessary to harness AI's potential while addressing inherent challenges.

The study investigates the multifaceted dimensions of AI capacity building, including curriculum development, faculty training, technological infrastructure, ethical considerations, and institutional policy frameworks. Through a comprehensive review of existing literature and analysis of current practices, this research identifies key success factors and barriers in implementing AI capacity building initiatives across diverse educational contexts.

The findings reveal that successful AI integration requires a holistic approach encompassing technical skill development, pedagogical innovation, ethical literacy, and organizational culture change. Universities must balance competing demands between preparing students for an AI-driven workforce, advancing AI research, and maintaining humanistic educational values. The discussion highlights the importance of interdisciplinary collaboration, sustained investment in digital infrastructure, and the development of context-appropriate AI literacy programs. Recommendations emphasize the need for policy frameworks that promote equitable access to AI education, support continuous faculty development, and foster responsible AI innovation that serves broader societal needs.

The report concludes that effective AI capacity building in higher education demands strategic leadership, inclusive stakeholder engagement, and adaptive governance structures that can respond to rapidly evolving technological landscapes and also foster an inclusive and sustainable AI-ready ecosystem.

***Keywords:*** *AI Digital Literacy, Curriculum Innovation & Development, Faculty Development, Educational Technology, Interdisciplinary Learning, Workforce Preparation.*

## **Role of Artificial Intelligence in Academic Learning and Library Utilization by College Students: A Survey Study**

**Dr. Swapan Khan**

Librarian, Narasinha Dutt College, Howrah, West Bengal

**Bikash Kumar Halder**

Librarian, Rabindra Mahavidyalaya, Champadanga, Hooghly, West Bengal

### ***Abstract:***

Artificial Intelligence (AI) has become an increasingly influential component of higher education, reshaping both academic learning practices and library utilization among college students. AI-enabled tools such as intelligent search systems, automated writing assistants, recommendation algorithms, and digital library platforms are now routinely used to support academic tasks.

This survey-based study investigates the role of Artificial Intelligence in academic learning and library utilization by college students. A descriptive research design was adopted, and primary data were collected through a structured questionnaire administered to undergraduate students. The survey examined the nature and frequency of AI tool usage, purposes related to academic learning and library activities, perceived benefits, and awareness of ethical issues associated with AI use. The collected data were analysed using simple statistical methods.

The findings indicate that a majority of students employ AI tools to support activities such as assignment preparation, concept clarification, language improvement, and examination readiness. With regard to library utilization, AI is mainly used for efficient literature searching, accessing electronic resources, refining search queries, and identifying relevant academic materials. Students generally perceive AI as a valuable academic aid that enhances learning efficiency and improves access to information. However, concerns related to excessive reliance on AI, reliability of AI-generated content, and limited understanding of ethical guidelines were also identified.

The study concludes that AI plays a significant role in contemporary academic learning and library practices, highlighting the need for institutional policies and information literacy initiatives that encourage responsible and ethical AI usage.

***Keywords:*** *Artificial Intelligence, Academic Learning, Library Utilization, College Students, Survey Study*

## **From Stacks to Intelligence: Navigating the AI-Transformed Library Ecosystem**

**Arpan Dutta**

Student, BLIS, University of North Bengal

**Debonita Mukherjee**

Student, BLIS, University of North Bengal

**Riya Chakladar**

Student, BLIS, University of North Bengal

### ***Abstract:***

The increasing application of artificial intelligence has led to significant changes in the organisation and delivery of library services. Libraries are no longer limited to their traditional role as custodians of recorded knowledge; instead, they are gradually adopting computational tools to support core operational and user-oriented functions.

This paper examines the use of artificial intelligence in areas such as cataloguing, metadata creation, information retrieval, and user assistance within library environments. The study examines how automated systems facilitate the performance of routine technical processes, including classification and indexing, thereby enhancing efficiency and allowing library professionals to devote more attention to reference work, collection development, and user education. It further analyses the influence of data-based systems on resource discovery and service delivery in both academic and public libraries.

Alongside these developments, the paper addresses several challenges associated with the adoption of artificial intelligence in libraries. Financial constraints, the need for professional training, concerns related to user data protection, and issues of bias in automated systems present serious limitations. These concerns call for a reconsideration of the professional role of librarians, emphasising their responsibility in supervising, interpreting, and ethically managing automated processes.

The paper concludes that while artificial intelligence can contribute to the improvement of library services, its application must be guided by professional judgment and ethical standards. A considered integration of technology, supported by human oversight, remains essential for maintaining the social and educational mission of libraries.

***Keywords:*** *Library services; Artificial intelligence; Information retrieval; Cataloguing and classification; User services; Professional ethics; Library automation*

## **Evolution of AI-Enabled Library Operations Research: A Bibliometric Analysis of Growth, Collaboration, and Research Themes (2006-2025)**

**Kishore Dey**

Librarian, Karunamoyee Library

**Dr. Suparna Naskar**

Librarian, Siliguri College, Siliguri, Darjeeling, West Bengal

**Dr. Tapan Barui**

Assistant Professor, DLIS, University of North Bengal, Raja Rammohunpur, Darjeeling, West Bengal

### ***Abstract:***

The application of Artificial Intelligence (AI) into library operations has reshaped traditional library functions and it has given intelligent information retrieval, automated cataloguing, personalized user services, and data-driven decision making for library professionals. It is found that in the last two decades, research on AI-driven library operations has expanded rapidly, yet a comprehensive understanding of its thematic evolution remains limited.

This study aims to trace the thematic evolution of AI-driven library operations and research through a combined bibliometric and topic modeling approach using Scopus-indexed literature published between 2006 and 2025 for better clarification. The dataset comprises 7661 conference paper, article, review, book chapter, conference review, book retrieved from Scopus on 10<sup>th</sup> January, 2026 using carefully constructed search queries (“artificial intelligence” OR AI OR “machine learning” OR “intelligent system\*”) AND (librar\*) AND (catalog\* OR metadata OR classification OR indexing OR circulation OR digitization OR “digital librar\*” OR automation OR workflow\*). Bibliometric techniques are applied to examine publication growth, citation impact, influential authors (Top 10 authors are identified and Ying Zhang of Department of Educational Technology, Peking University has contributed 67 articles), and keyword co-occurrence patterns. LDA (Latent Dirichlet Allocation) has been used to find out top 10 most relevant topics. Advanced visualization tools, including VOSviewer and Biblioshiny are used to map thematic clusters, co-occurrence networks, and temporal shifts in research focus.

The results indicate a clear evolution from early studies emphasizing automation and expert systems toward contemporary themes such as machine learning, natural language processing, recommender systems, intelligent digital libraries, and user behavior analytics. Emerging themes highlight the growing role of deep learning, AI ethics, and explainable AI in library contexts. By integrating bibliometric indicators, this study provides a robust and holistic overview of the intellectual and thematic development of AI-driven library operations research. The findings offer valuable insights for researchers, practitioners, and policy makers, and identify future research directions for AI-enabled library services.

***Keywords:*** *AI-Driven Library Operations, AI/ML, Academic Library, Bibliometric analysis, Topic modeling*

## **A Review of Artificial Intelligence (AI) in Library and Information Services During the Digital Era**

**Malay Kanti Pramanik**

Librarian of Dhali Institute of Teacher Education

### ***Abstract:***

Artificial Intelligence (AI) plays a critical role in library. This paper aims to review the artificial intelligence adoption in library and information services during the digital Era. This study explores how libraries have responded to this opportunity at the level of strategy, what is the status of the application of AI. It has been suggested that the rapid development of Artificial Intelligence (AI) is causing a scientific and technological revolution and industrial transformation. Many aspects of our daily lives are undergoing tremendous change due to technologies such as speech recognition, face recognition, computer vision, natural language processing, and machine translation, virtual assistant and intelligent search. AI can be seen to echo the patchy character of past library automation and digitalization process, such as the spread of research data management practices.

However On the whole, libraries and librarianship still seem to hold a positive attitude towards the potential changes brought by AI, and the library could take the initiatives to adopt AI in a safe, responsible and effective way to improve its working and user services. AI is a focus of research funding. For librarians, artificial intelligence may be confused with the concepts of library automation; intelligence may be confused with the concepts of library automation, intelligent or smart library, as a consequence of lacking knowledge and lower perceptions of AI. AI is transforming library services in the digital era, moving them beyond traditional print repositories to dynamics, technology-driven information hubs. AI is enhancing efficiency, improving resource discovery, and evolving the role of library professionals. AI should be made use of to process documents in batches and realize automatic processing for classification, cataloguing, indexing and abstracting of documents. AI driven finding from data analytics give library managers useful data they can use to make smart choices about allocating resources, improving services, and making plans for the future. By using AI methods, libraries can changes with the needs of their users, predict future trends. AI can revolutionize library services, improve information quality, increases productivity, and provide virtual assistance. To fully exploit the benefits of AI, libraries must develop plans and policies, train librarians with the necessary skills. AI has emerged as a key driver of change & development in modern society & plays a critical role in transforming libraries into smart & intelligent institutions. AI has the advantages of transforming all aspects of human activity, including digital libraries & the information environment.

***Keywords:*** Artificial Intelligence, Information and Communication Technology, Digital Library, Library and Information Services, Digital Era & Library Automation.

## **Leveraging Web Tools for Efficient Resource Management and Distribution in KVS School Libraries**

**Tanmay Mondal**

Librarian, PM Shri Kv Ballygunge

### ***Abstract:***

School libraries in Kendriya Vidyalaya Sangathan (KVS) play a vital role in supporting teaching–learning processes and promoting reading habits among students. The use of web-based tools has significantly improved the efficiency of resource management and distribution in KVS school libraries. Through Library Management Systems (LMS), online catalogues (OPAC), and digital repositories, librarians can easily classify, issue, return, and track books and other learning resources. Web tools enable quick access to e-books, journals, educational websites, and DIKSHA platforms, ensuring equitable access to information for students and teachers across all Kendriya Vidyalayas.

Online communication tools such as school websites, e-notices, and social media help libraries inform users about new arrivals, reading activities, and library programs. Digital tools such as Book Creator, Edpuzzle, Canva, H5P, Epic, Story Jumper, Kahoot, Padlet support effective resource management and enrich learning experiences in KVS school libraries. Book Creator and StoryJumper encourage students to create their own digital books, promoting creativity and reading skills. Epic provides access to a vast digital library, supporting independent reading and curriculum needs.

Interactive tools like Edpuzzle and H5P help librarians and teachers create engaging learning content from videos and presentations. Canva is useful for designing posters, reading campaigns, newsletters, and library displays. Kahoot makes library orientation, quizzes, and book reviews fun and interactive. Padlet enables collaborative sharing of book recommendations, reading reflections, and library activities.

By integrating these web tools, KVS school libraries become dynamic learning hubs, ensuring efficient distribution of digital resources, learner engagement, and alignment with NEP 2020 and digital education initiatives. Overall, leveraging web tools in KVS school libraries enhances accessibility, transparency, and effective utilization of resources, aligning with KVS's objective of providing quality, technology-enabled education.

***Keywords:*** Digital Resource, Web Tools, KVS

## **Media Literacy, Cyber Awareness, and Open Educational Resources (OERs): Enhancing Responsible Information Use in the Digital Age**

**Md. Manirul Islam**

Ph.D. Scholar, DLIS, Niilm University, Kaithal, Haryana

### ***Abstract:***

The rapid expansion of digital technologies has transformed information creation, dissemination, and consumption, enabling unprecedented access to knowledge through online platforms and Open Educational Resources (OERs). While this transformation has democratized learning and reduced traditional barriers to information access, it has also intensified challenges related to misinformation, cyber threats, unethical information use, and digital vulnerability. In this context, media literacy, cyber awareness, and information literacy have emerged as essential competencies for responsible participation in the digital information ecosystem.

This study examines the integrated role of media literacy, cyber awareness, and OERs in promoting responsible, ethical, and informed information use in the digital age. It analyzes how media literacy supports the identification and mitigation of misinformation, how cyber awareness strengthens safe and ethical online behavior, and how OERs can be effectively integrated into formal and informal learning environments to foster inclusive and responsible knowledge sharing.

The study adopts a conceptual–analytical approach supported by secondary data, established digital literacy frameworks, and empirical indicators from large-scale educational and information studies, with scope for future empirical validation. The findings indicate that media literacy significantly enhances users’ ability to critically evaluate digital content and resist misinformation, while cyber awareness reinforces ethical digital citizenship through improved data privacy and cybersecurity practices.

The study further establishes that OERs, when embedded within strong media and information literacy frameworks, enhance equitable access to education, support lifelong learning, and encourage ethical knowledge reuse and collaboration. However, inadequate literacy training limits the effective utilization of OERs. Based on these findings, the study proposes an integrated framework positioning media literacy, information literacy, and cyber awareness as core competencies for responsible digital information behavior, with OERs serving as key enablers.

The study contributes an interdisciplinary perspective with practical implications for educators, libraries, policymakers, and digital platforms, emphasizing the need for coordinated strategies to address misinformation, cyber risk, and inequitable information access in the digital age.

***Keywords:*** *Media Literacy, Cyber Awareness, Open Educational Resources (OERs), Information Literacy, Online Information Access, Responsible Information Use.*

## AI-Powered Fashion Libraries

Arja Chakraborty

Student, BLIS, DLIS, Jadavpur University, Kolkata

### **Abstract:**

The rapid integration of Artificial Intelligence (AI) within Library and Information Systems (LIS) has significantly reshaped the idea of intelligent libraries, focusing on innovation, sustainability, effective management, and user-centric access to knowledge. While most of the scholarly discussions on intelligent libraries touch on academic, public, digital, and other established knowledge environments, relatively little attention is paid to emerging non-traditional domains that apply similar principles of information organisation, discovery, and retrieval. Meanwhile, in response to the growing challenges of sustainability, the fashion and clothing industry has increasingly embraced AI-driven platforms for the purposes of digital curation, design automation, trend analysis, and personalised user discovery. This paper introduces the concept of AI-powered fashion libraries as innovative and sustainable extensions of intelligent library models within the LIS domain. AI-powered fashion libraries can be understood as digital information systems using technologies of AI for managing, organising, and disseminating large collections of information objects related to fashion in the forms of digital garments, textiles, design components, and associated data on sustainability. While these are not libraries in the traditional institutional meaning, their functional frameworks nevertheless run very close to key principles underlying LIS, such as collection development, organising metadata, classification, and information retrieval. Fashion artefacts in this context are understood as information objects carrying descriptive, technical, and sustainability attributes that allow for structured discovery and informed decision-making. Innovation in AI-enabled fashion libraries is most evident in design and prototyping. Three-dimensional digital asset libraries of fabrics, patterns, trims, and garment silhouettes let designers reuse and repurpose elements rather than requiring multiple physical samples and thereby cutting down on material waste. Such a repository of various components enables generative AI applications to generate new design concepts from given textual or visual inputs. Moreover, AI-enabled three-dimensional visualisation and simulation allow designers to review the garment's fit, movement, and structure before actual production, reducing overproduction and resource-intensive trial-and-error processes. Automation of pattern technologies creates accurate, production-ready patterns while optimising material usage. Beyond design, AI-powered fashion libraries are important for trend analysis and strategic planning. AI-powered trend forecasting tools analyse vast volumes of data extracted from social media, online marketplaces, and runway events, structuring unstructured inputs into structured insights that develop sustainable design and inventory decisions. Similarly, AI-powered sourcing platforms enable the circularity of fashion through their seamless search, retrieval, and reuse of textile and supplier information. With an LIS perspective, these systems allow for more advanced applications involving knowledge organisation and retrieval processes in a data-intensive environment. AI-driven fashion libraries in marketing and e-commerce have contributed to sustainable innovation by reducing the ecological footprint brought forth by traditional retail methods. Generative AI virtual photography yields large-scale, digitally created content at a much lower level of dependence on physical photoshoots. Virtual try-on and styling systems enhance user discovery by enabling personalised visualisation of garments, thereby increasing consumer confidence while decreasing return rates. Next, this paper locates such a discussion within the Indian context, where fashion and textiles are important knowledge systems. Traditional crafts such as Banarasi weaves, Jamdani textiles, Batik techniques, and Kantha embroidery, all bear historic, regional, and artisanal knowledge. AI-powered fashion libraries offer immense potential for such heritage to be digitally preserved, organised, and made discoverable through structured metadata and AI-powered retrieval. The research frames historical costume like eighteenth- and nineteenth-century dresses, Victorian fashion, and royal attire as archival information resources that would be useful in informing studies dealing with disciplines like costume design, theatre studies, fashion history, and visual culture. The paper concludes by positioning AI-powered fashion libraries as innovative and sustainable manifestations of intelligent libraries operating beyond conventional institutional boundaries. By integrating the principles of LIS with AI-driven fashion technologies, this study contributes to the emerging discourse on sustainable and interdisciplinary applications of intelligent library systems while highlighting future directions of research and professional practice within the field of LIS.

**Keywords:** *AI; Intelligent Libraries; Digital Libraries; Fashion Information Systems; Sustainability*





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8, Chandi Charan Ghosh Road ● RAJDEEP APARTMENT, Flat - 2C ● Silpara, Kolkata - 700008  
Mobile : 98310 23104 ● E-mail : [souvik@libraryconnect.in](mailto:souvik@libraryconnect.in)

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Phone: +91 98310 23104  
E-mail: [souvik@libraryconnect.in](mailto:souvik@libraryconnect.in)  
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## About the Seminar

**This Seminar aims to explore:**

- **AI's role and impact on core library functions, including acquisition, cataloguing, metadata creation, and user services, intelligent archiving, digitization, etc..**
- **Discuss user interface advancements and discovery tools enhanced by AI for personalized and predictive services.**
- **Encourage collaboration between educators, librarians, and technologists for the effective adoption and implementation of AI solutions.**
- **Share best practices, real-world case studies as well as innovative approaches towards using AI in academic environments.**
- **Understand AI's role in scholarly communication, including metric study, research management, and publication workflows.**
- **Critically analyze the ethical, legal, and policy implications of AI, addressing issues of bias, privacy, and intellectual property rights (IPR).**
- **Highlight the importance of AI in capacity building in educational and professional training.**
- **Investigate how AI can support inclusive services and bridge digital divides in multilingual and underserved communities.**

## Universal Briefing

**Universal Briefing is a voluntary, non-profit platform established during the 2020 pandemic to advance Library & Information Services. Headquartered in Ramchandrapur North, Kolkata, it operates under the Presidentship of Prof. Udayan Bhattacharya. The organization bridges the academic-professional gap through its monthly "Study Circles" and webinars, covering plethora of topics related to current research. In November 2023, UB launched its official Universal Briefing Newsletter (ISSN: 3048-8737), a monthly digital publication that disseminates industry news, employment opportunities, and research trends to the LIS community. Its mission focuses on open science, skill development for "budding generations," and promoting global knowledge movements.**

## Muralidhar Girls' College

**Established in 1940 and affiliated with the University of Calcutta, Muralidhar Girls' College is located at P-411/14 Gariahat Road, Ballygunge. The institution was awarded an 'A' grade in its 3rd cycle of NAAC accreditation in 2023. It offers a wide range of undergraduate programs, including 4-year B.A./B.Sc. Honours courses and unique vocational streams like Tourism and Travel Management (TTMV). Departments such as Bengali have existed since the college's inception, while the Education department was added in 1963 to support first-generation learners. The campus features modern amenities, including an ICT-enabled teaching environment and a dedicated career counseling cell etc.**

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